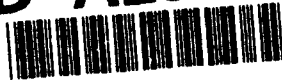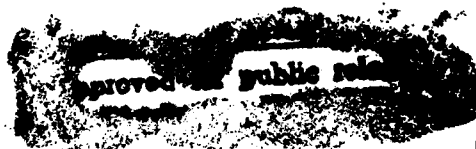# DoD Civilian Training:
Source, Content, Frequency and Cost

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FINAL REPORT
March 1994

DTIC QUALITY INSPECTED 2

approved for public release

94-17457

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FOREWARD

The Assistant Secretary of Defense for Personnel and Readiness issued a tasker in November 1993 to *determine the sources, content, frequency and total cost* of training the DoD civilian workforce. This task was performed as an in house project by the Defense Institute for Training Resources Analysis. Mr. Vince Lauter was the project director.

The final report of this research project documents the scope and resource investment in training DoD civilians. It presents case studies of DoD schools conducting professional development short courses for military and civilian members of DoD. The report also addresses questions to and comments from participating DoD components in areas where DITRA had no empirical evidence upon which to base conclusions or recommendations. The report concludes by observing five major areas worth watching.

This research documents important information needed by the DoD in its ongoing investigations to provide the most effective and cost efficient methods of training readiness to the DoD total force.

Howard H. McFann
Executive Director

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The Defense Institute for Training Resources Analysis was given a civilian training research task from the Assistant Secretary of Defense for Personnel & Readiness on November 2, 1993. Our task was to perform a detailed study by March 31, 1994, of training given to the DoD civilian workforce, and to determine the sources, content, frequency and total cost of civilian training. The study was to focus on areas where manpower or cost savings could result from potential consolidations or more effective use of civilian training resources. The study would also include a separate analysis of professional development short courses for military and civilian members of DoD.

We compiled the latest available training workload and cost data from the Defense Manpower Data Center, U.S. Office of Personnel Management and numerous DoD training institutions. All costs were converted to FY94 dollars. We also held two In-Progress Reviews with 14 participating DoD components.

We will describe resource requirements in terms of net costs [excluding civilian salary while in training] and total costs [including civilian salary while in training]. We make this differentiation because civilian salaries are paid whether or not people are in training and because they are funded outside training resource channels. Total cost reflects DoD's total

resource investment during the training process.

In FY92, the Department incurred $551 million in net cost and $1,064 million in total cost to train its civilian workforce. These figures are based on DoD component input to OPM. Net and total costs fell by 15 and 13 percent between FY90-92, during which time the size of the DoD civilian workforce dropped by four percent. The FY92 net and total costs per individual trained were $1,161 and $2,242, respectively. Of 972,000 DoD civilians, almost half (475,000) attended 983,000 training events at least eight hours long. The DoD portion of this training was conducted through 2,237 courses offered by 120 different training institutions.

We developed two benchmarks for civilian training tempo. These are percent of workforce trained and average hours of training received per trainee. We found that the training tempo remained relatively constant between FY90-92:

- percent of workforce trained fell slightly, from 50 to 49 percent

- average hours of training received per trainee was 55 in FY92, compared with 59 hours in FY90.

We learned through case studies of schools conducting professional development short courses that fee for

service training is underway at Army Management Engineering College, and that DoD's acquisition and comptroller communities are transitioning to standardized training offered by a consortium of DoD schools.

We then asked 14 participating DoD components to address questions for which we had no empirical evidence upon which to base conclusions or recommendations. These questions dealt with quantifying additional indirect costs, listing methodologies to link civilian training costs to specific DoD appropriations and identifying areas of potential resource savings. Seven DoD components responded, stating:

- they already report indirect training costs to OPM and that existing DoD data bases do not allow them to capture any additional indirect costs

- it is difficult to link costs to DoD appropriations because DoD lacks a standard cost accounting system

- potential resource savings may be achieved by conducting requirements-based training assessments and by exploring better uses of technology, especially distance learning techniques.

We posit there are five major areas worth watching:

- consortium-based training, such as that conducted in the acquisition and comptroller communities under the

aegis of Defense Acquisition University and Defense Business Management University

- the evolution of fee for service training, such as that instituted in FY94 by Army Management Engineering College (AMEC)

- new DoD training initiatives that result from AMEC being designated a Defense Performance Review Reinvention Laboratory in December 1993.

- trends in technology-based instruction, such as distance learning techniques. It would be beneficial from a resource tradeoff perspective to compare cost per student trained using these technologies with those of traditional means of instruction.

- overall cost-benefit improvements resulting from require-ments-based training needs assessments.

We will work with the Office of Secretary of Defense, Personnel and Readiness community and the Defense Manpower Data Center to build and maintain a civilian training data base. This will benefit DoD in two ways. First, it fills an information gap, since our research disclosed there is currently no central source of such information. Second, it generates more valid and reliable civilian training data, since we discovered DoD components reported incomplete or inaccurate civilian training data to OPM.

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CHAPTER 1: INTRODUCTION

SCOPE OF WORK

On November 2, 1993, the Defense Institute for Training Resources Analysis was given responsibility for completing the following task:

"The Assistant Secretary of Defense for Personnel & Readiness, with assistance from the services and defense agencies, will perform a detailed study of the training of the Department of Defense civilian workforce. The objective of the study is to determine the sources, content, frequency and costs of civilian training.

The study will focus on areas where manpower or cost savings could result from potential consolidations or more effective use of civilian training resources. The study should include a separate analysis of professional development short courses for both military and civilian members of the Department. The study will be completed by March 31, 1994."

ANALYTICAL APPROACH

We conducted our research using a four step analytical approach:

• identifying the source, content, frequency and cost of training provided to DoD civilians

• presenting case studies of selected DoD institutions that provide significant levels of training to DoD civilians

• identifying unanswered questions relevant to this study and soliciting comments from DoD components participating in the study review process

• making recommendations only when supported by empirical evidence. When this is not possible, we provided observations on major civilian training areas worth watching in the future.

RESEARCH GUIDELINES

We followed four guidelines while compiling research data, assessing their impact on DoD civilian training and developing our report:

• identify reliable and recent data sources. We will show three major sources. Training workload data were primarily extracted from annual DoD component civilian training reports to Office of Personnel Management. The location and number of courses offered at service training institutions was obtained from the Defense Manpower Data Center (DMDC). Finally, we contacted other DoD schools directly to obtain statistics on location and number of courses offered to DoD civilians, since these data are not reported to DMDC.

• present all costs in constant FY94 dollars. This involved using DoD deflators generated by the Office of the Comptroller, Department of Defense.

• assume that short-term courses are those from eight class hours (one day) to 120 class days, and long-term courses are those 121 days and longer. We found that OPM reporting guidelines preclude reporting training events under eight hours duration.

• conduct In Progress Reviews (IPR) for and solicit comments from participating DoD organizations. We held IPRs in January and February 1994 that were attended by some or all of the following organizations:

Deputy Assistant Secretary of Defense, Requirements and Resources
Office of the Assistant Secretary of Defense, Personnel & Readiness,
        Civilian Personnel Policy/Equal Opportunity, Staffing and Career Development
Office of the Secretary of Defense, Program Analysis & Evaluation
Office of the Comptroller of the Department of Defense
Under Secretary of Defense for Readiness (Readiness & Training)
Defense Manpower Data Center
Headquarters, U.S. Air Force
Headquarters, U.S. Army
Headquarters, U.S. Navy
Defense Information School
Office of the Under Secretary of Defense (Acquisition & Technology), Acquisition Education,
        Training and Career Development
Defense Logistics Agency
Defense Commissary Agency
Defense Contract Audit Agency
Defense Mapping Agency
Washington Headquarters Service
Defense Intelligence Agency
Department of Defense Dependents Schools
Department of Defense Inspector General

Appendix A contains a list of DoD and other federal activities that participated in this project.

CHAPTER 2: SOURCE

This chapter defines who provides training to DoD civilians, the types of courses offered and major DoD training institutions. Data were obtained from three sources: the Defense Manpower Data Center (DMDC), Monterey, CA; DoD training institutions not controlled by the services; and annual DoD component input to the U.S. Office of Personnel Management (OPM), Washington, DC.

The services report training workload at individual training institutions to DMDC, which compiles this in the Training Output Data File. This file was established and is maintained to capture military training data. Services are not required to report civilian trainee statistics.

Other DoD training institutions are those controlled by Defense agencies. We will show that in FY93 there were 12 such institutions that trained DoD civilians in 119 different courses. The two largest such institutions in terms of number of courses offered are the Defense Informations Systems Agency (Arlington, VA) and the Defense Systems Management College (Fort Belvoir, VA).

DoD components report their annual civilian training statistics directly to OPM on OPM Form 1186 (Personnel Engaged in Agency Training Activities) and OPM Form 1524 (Annual Statistical Summary of Training Data). We will depict training workload data only through FY92, since many components were still compiling their FY93 statistics when this report was being prepared. A list of DoD components who reported FY90-92 civilian training statistics to OPM is shown at Appendix B.

DoD components report training workload to OPM according to four training sources, which are defined by OPM as:

- **within DoD component**, or training controlled by and given to its own workers. For example, this would include Navy conducting courses for Navy civilians.

- **other federal**, or training provided by federal activities other than the one in which the trainee is employed. An example of this would be Navy sending Navy civilians to courses offered by Army, OPM, or General Services Administration.

- **college & professional association**, which includes training controlled and given by a college, university or educational institution, professional society, association, or other non-profit group.

- **private**, or training provided by, in, or through an individual contractor, commercial concern or other profit making concern. This category includes individual vendors who may be affiliated with a university but who are providing training as private persons.

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FIGURE 2-1
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FY 92 TRAINING HOURS BY SOURCE
(HOURS IN THOUSANDS)

SHORT-TERM TRAINING
(TOTAL: 25,112)

LONG-TERM TRAINING
(TOTAL: 830)

4,712
(19%)

13,545
(54%)

3,048
(12%)

3,807
(15%)

50
(6%)

271
(33%)

55
(6%)

454
(55%)

☐WITHIN DoD COMPONENT ▦PRIVATE ☐COLLEGE & PROFESSIONAL ASSOC
▉OTHER FEDERAL
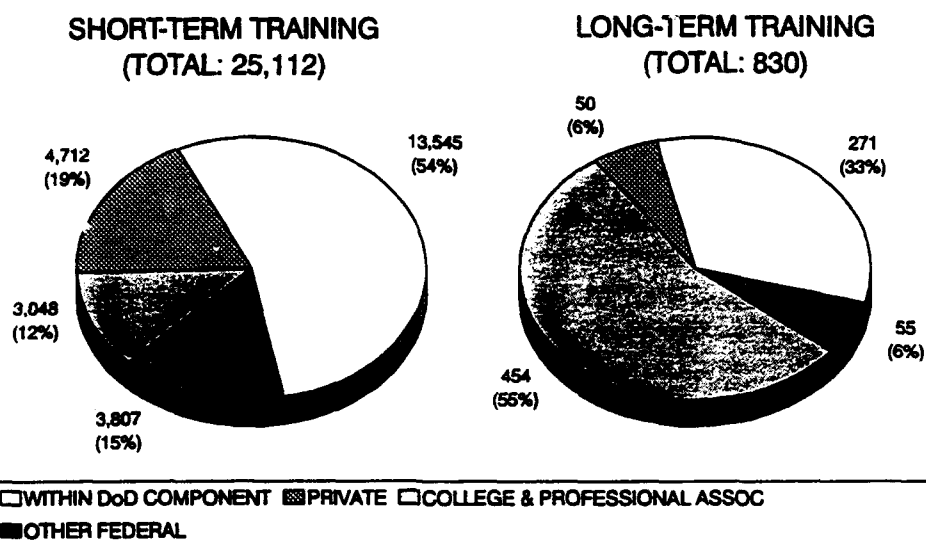
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

TRAINING HOURS BY SOURCE

As shown in Figure 2-1, DoD civilians attended about 25.1 million hours of short-term and 830,000 hours of long-term training in FY92. These total categories were based on OPM guidance: short-term training is from one full day (eight hours) to 120 class days, while long-term training is 121 or more class days. Training events less than eight hours long are not reported to OPM and thus are not included in this report. The two categories amount to about 25.9 million hours. Short-term training accounts for 97 percent of the total.

We found that DoD components are providing most short-term training but send most of their long-term trainees to colleges and professional associations. Just over half (54 percent) of short-term hours were devoted to training conducted within DoD component. Colleges and professional associations accounted for 55 percent of long-term hours, with only 33 percent of those hours attributed to sources within DoD component. DoD components rely very little on other federal and private sources of long-term training. They amounted to only 12 percent of the total.

TRENDS IN SHORT-TERM TRAINING

Figure 2-2 shows the FY90-92 trend in short-term training hours attended by the DoD civilian workforce. Total short-term hours in FY92 were 12 percent below FY90 and there was no significant change in the distribution of training among the four sources, since they all experienced roughly the same percentage decrease:

- within DoD component hours fell 12 percent to 13.6 million

- other federal hours dropped 14 percent to 3.8 million

- private hours declined by eight percent to 4.7 million

- college and professional association hours fell 16 percent to 3.0 million.

FIGURE 2-2

DoD SHORT-TERM TRAINING HOURS

(FY92 AMOUNT SHOWN IN PARENTHESES)

COLLEGE & PROFESSIONAL ASSOCIATION (3.0)

PRIVATE (4.7)

OTHER FEDERAL (3.8)

WITHIN DoD COMPONENT (13.6)
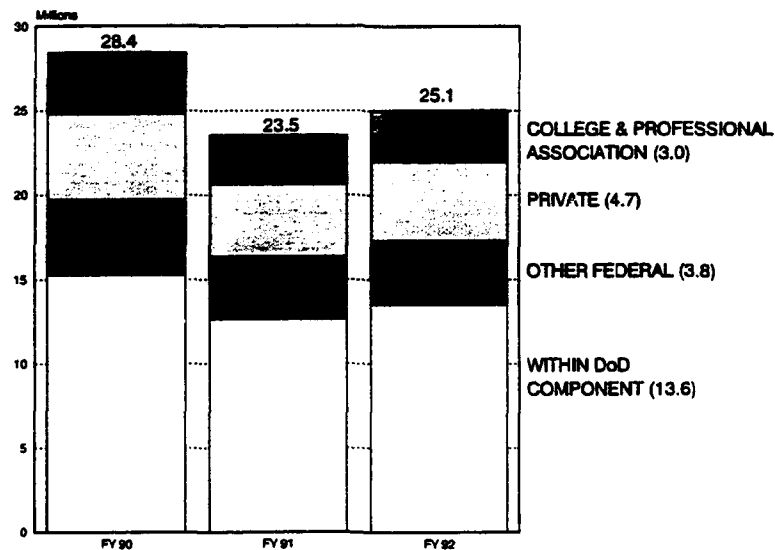
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

FIGURE 2-3

DoD LONG-TERM TRAINING HOURS

(FY92 AMOUNT SHOWN IN PARENTHESES)

THOUSANDS

FY90: 1315
FY91: 817
FY92: 830

COLLEGE & PROFESSIONAL ASSOCIATION (454)
PRIVATE (50)
OTHER FEDERAL (55)
WITHIN DoD COMPONENT (271)
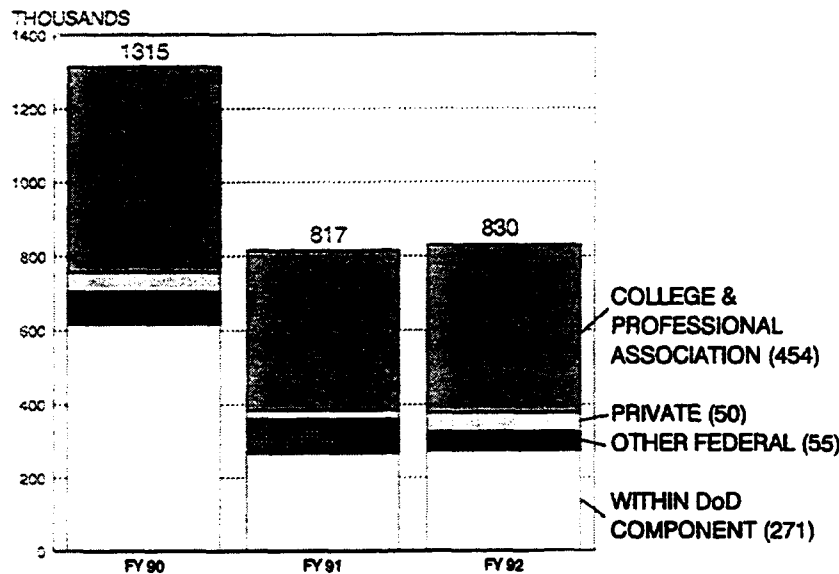
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

TRENDS IN LONG-TERM TRAINING

Total long-term training hours in FY92 were 37 percent below the 1.3 million hours reported in FY90, as shown in Figure 2-3. This reduction is more than three times the 12 percent decrease in short-term hours. We find a wide variation in hours of long-term training by source. Between FY90-92:

• within DoD component hours declined 56 percent to 271,000. This is primarily explained by the fact that Army reduced its long-term training hours by 67 percent, from 589,000 to 196,000.

Army feels this information may be incorrect and they have since changed from a manual to a more accurate automated data collection system.

• other federal hours dropped 39 percent to 55,000, while college and professional association hours fell 19 percent to 454,000.

• private sources remained unchanged at 50,000 hours.

FEDERAL WORKFORCE TRAINING COMPARISON

OPM's Human Resources Development Group prepares an annual report of government-wide civilian training. OPM provided a draft version of their FY92 report and the percentage distribution of training hours by source is shown in Figure 2-4. Note that DoD training received within component is 10 percentage points or 16 percent under the federal average. DoD is slightly above the federal average in percent of training hours provided by the other three sources. This suggests that DoD is somewhat more likely to send trainees outside their component.

FIGURE 2-4

FY 92 COMPARISON OF DoD vs. TOTAL FEDERAL WORKFORCE TRAINING HOURS

% TRAINING RECEIVED	DoD	TOTAL FEDERAL (INCL DoD)
WITHIN COMPONENT	53%	63%
OTHER FEDERAL	15	11
PRIVATE	18	16
COLLEGE & PROFESSIONAL ASSOC	14	10
TOTAL	100%	100%

SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS AND OTHER FEDERAL AGENCIES

DoD TRAINING SOURCES

This section of Chapter 2 will discuss DoD sources that train the civilian workforce. As mentioned above, DMDC maintains such information on service schools in its Training Output Data File. We requested and obtained input from the following other DoD schools that do not report training statistics to DMDC. These data are shown as "Other" on subsequent tables. Note that all Navy training data includes the Marine Corps.

Armed Forces Medical Intelligence Center (Fort Detrick, MD)
Defense Commissary Agency (Fort Lee, VA)
Defense Equal Opportunity Management Institute (Patrick AFB, FL)
Defense Information School (Fort Benjamin Harrison, IN)
Defense Information Systems Agency (Arlington, VA)
Defense Mapping School (Fort Belvoir, VA)
Defense Photography School (Pensacola, FL) [trained no civilians in FY93]
Defense Polygraph Institute (Fort McClellan, AL)
Defense Resources Management Institute (Monterey, CA)
Defense Security Institute (Richmond, VA)
Defense Systems Management College (Fort Belvoir, VA)
Defense Visual Information School (Lowry AFB, CO)
Information Resources Management College (Fort McNair, DC)

TABLE 2-1

COURSES ATTENDED BY DoD CIVILIANS

DoD COMPONENT	FY 91		FY 92		FY 93	
	TRAINING INSTITUTIONS	NO. COURSES	TRAINING INSTITUTIONS	NO. COURSES	TRAINING INSTITUTIONS	NO. COURSES
ARMY	33	745	30	741	31	723
NAVY	64	659	64	640	66	638
USAF	8 *	131	13	732	13	629
OTHER	12	114	13	124	12	119
TOTAL	117	1,649	120	2,237	122	2,109

SOURCES: DMDC TRAINING OUTPUT DATA FILE FOR ARMY, NAVY, USAF; DIRECT INPUT FROM OTHER DoD COMPONENTS

* PARTIAL INPUT: NO CIVILIANS REPORTED FOR 5 TRAINING WINGS IN FY 91

Table 2-1 shows that the number of DoD institutions and courses attended by DoD civilians remained relatively constant from FY91 through FY93. This inference is made after including the fact that DMDC is missing FY91 Air Force data on civilians who attended training at five training wings. Looking just at FY92 and FY93 data, we see that the number of courses DoD civilians attended dropped from 2,237 to 2,109, while the number of DoD training institutions rose from 120 to 122. Appendix C contains an itemized list of these institutions. We further note that over 98 percent, or 2,085 of the 2,109 courses in FY93, involves short-term training. Appendix D contains a listing of the 24 DoD long-term courses. A complete listing of all 2,109 courses is available upon request.

Navy has the most FY93 training institutions (66) and offers the second largest number of courses attended by DoD civilians (638). DMDC files indicate that Navy frequently offers the same course at various training institutions. For example, Fundamentals of Total Quality Leadership is offered at 12 locations, while two other courses are taught at eight locations each-- Communications Security Material Systems Custodian and Training Material Development Systems Curriculum.

Army has a more centralized training network for DoD civilians. Army trained civilians in 723 different courses held at 31 training institutions during FY93. We found that 60 percent of these 723 courses were held at just four institutions--Army Engineer Division (Huntsville, AL), Army Management Engineering College, Army Logistics Management College and Army Defense Ammunition School. We will examine two of these in greater detail in Chapter 6, Case Studies.

Air Force offered almost as many courses (629) in FY93 as Navy, but operates a highly centralized training network. It has only 12 installations that train civilians, compared with 66 for Navy.

The Defense Systems Management College and Defense Information Systems Agency provided almost half of the courses offered by other DoD training institutions. These two institutions conducted 53 of the 119 courses in FY93, or 45 percent of the total.

TABLE 2-2
BRAC IMPACTS ON TRAINING INSTITUTIONS

INSTITUTION	LOSING LOCATION	GAINING LOCATION
ARMY		
Adjutant General School	Ft. Ben Harrison, IN	Ft. Jackson, SC
Finance School	Ft. Ben Harrison, IN	Ft. Jackson, SC
Recruiting & Retention School	Ft. Ben Harrison, IN	Ft. Jackson, SC
Army Intelligence School	Ft. Devens, MA	Ft. Huachuca, AZ
NAVY		
Fleet & Mine Warfare	Charleston, SC	Ingleside, TX
Submarine Training Facility	Charleston, SC	(Disestablish)
Naval Air Maint Training Group	El Toro, CA	San Diego, CA
Naval Air Maint Training Group	Tustin, CA	San Diego, CA
Service School Command	Orlando, FL	Great Lakes, IL
Naval Tech Training Center:	San Francisco, CA	
Senior Enlisted Damage Control		San Diego, CA
Damage Controlman School/Cargo Wpns Elevator		Great Lakes, IL
Underway Replenishment		Little Creek, VA
Fire School		(Disestablish)
Chief, Naval Tech Training Center	Memphis, TN	Pensacola, FL
Naval Air Tech Training Center	Memphis, TN	Pensacola, FL
AIR FORCE		
3400 Technical Training Wing:	Lowry AFB, CO	
Aircraft Armament, Nuc Wpns & Munitions		Sheppard AFB, TX
Meteorology Space Maintenance		Keesler AFB, MS
Space Operations		Vandenberg AFB, CA
Logistics		Lackland AFB, TX
Seismic Sensor		Goodfellow AFB, TX
3330 Technical Training Wing:	Chanute AFB, IL	
Aircraft Systems		Sheppard AFB, TX
Large Missile Repair		Vandenberg AFB, CA
Vehicle Maintenance		Lackland AFB, TX
Weather		Keesler AFB, MS
OTHER		
Defense Information School	Ft. Ben Harrison, IN	Ft. Meade, MD
Defense Visual Information School	Lowry AFB, CO	Ft. Meade, MD/Pensacola, FL

SOURCE: BRAC POINTS OF CONTACT AT TRAINING INSTITUTIONS

BASE REALIGNMENT AND CLOSURE

Earlier Base Realignment and Closure (BRAC) decisions will affect the number and location of institutions that train DoD civilians. These 16 institutions trained 3,844 civilians in FY93. Table 2-2 depicts these changes.

Eight Navy institutions that trained 276 civilians are impacted. The Submarine Training Facility at Charleston, SC, and the Fire School portion of the Naval Technical Training Center, San Francisco, CA, will close.

The remaining seven institutions will move to five different locations.

Army trained 1,895 civilians in FY93 at four such institutions. This includes 1,886 civilians trained at Army Finance School, Fort Benjamin Harrison, IN. Three institutions will relocate from Fort Benjamin Harrison, IN, to Fort Jackson, SC. Army Intelligence School will move to Fort Huachuca, AZ, from Fort Devens, MA.

There were 1,507 civilians trained in FY93 at two Air Force institutions affected by BRAC. The 3330th Technical Training Wing has relocated its functional training mission to four different locations. Similarly, the 3400th Technical Training Wing is moving training to five locations.

We learned that 166 civilians were trained in FY93 at two other DoD schools: Defense Information School (Fort Benjamin Harrison, IN) and Defense Visual Information School (Lowry AFB, CO). These two institutions are scheduled to consolidate as the Defense Information School in FY97 at Fort Meade, MD.

MAJOR DoD TRAINING SOURCES

Displayed in Figure 2-5 are 14 DoD schools that are among the major providers of training to DoD civilians. Of these 14 institutions training more than 500 civilians in FY93, seven are Army, three are Air Force, one Navy and three are Other DoD. Army trained 47 percent of all civilians attending DoD schools at its Engineer Division (Huntsville, AL), Logistics Management College and Management Engineering College. The fourth largest provider was the Graduate Program at Wright-Patterson Air Force Base where 3,834 civilians were trained in FY93. Note that there are seven institutions, six belonging to the Army and one Other DoD, where civilians comprise at least 50 percent of all graduates. We will examine three of these in Chapter 6, Case Studies.

FIGURE 2-5

MAJOR DoD SOURCES
OF FY93 CIVILIAN TRAINING

DoD COMPONENT	INSTITUTION (LOCATION)	DoD CIVILIAN GRADUATES
ARMY *	ARMY ENGINEER DIVISION (HUNTSVILLE, AL)	12,853
ARMY *	LOGISTICS MGMT COLLEGE (FT LEE, VA)	12,528
ARMY *	MGMT ENGINEERING COLLEGE (ROCK ISLAND, IL)	11,809
USAF	GRADUATE EDUCATION (WRIGHT-PATTERSON AFB, OH)	3,834
DoD *	DEFENSE SYSTEMS MANAGEMENT COLLEGE (FT BELVOIR, VA)	3,142
USAF	3700TH TECH TNG WING (SHEPPARD AFB, TX)	2,978
ARMY *	DEFENSE AMMUNITION SCHOOL (SAVANNA, IL)	2,720
ARMY	CMD & GEN STAFF COLLEGE (FT LEAVENWORTH, KS)	2,225
ARMY *	FINANCE SCHOOL (FT B. HARRISON, IN)	1,888
USAF	3300TH TECH TNG WING (KEESLER AFB, MS)	1,844
DoD	DEFENSE INFORMATION SYSTEMS AGENCY (ARLINGTON, VA)	1,754
NAVY	CIV ENGR CORPS OFCR SCHOOL (PORT HUENEME, CA)	1,365
DoD	INFO RES MGMT COLLEGE (NDU, FT McNAIR, DC)	759
ARMY *	ENGINEERING & HOUSING SUPPORT CENTER (FT BELVOIR,	551

SOURCE: DMDC TRAINING OUTPUT DATA FILE
* AT LEAST 50 PERCENT OF ALL GRADUATES ARE DoD CIVILIANS

TRAINING ATTENDED ONLY BY CIVILIANS

We finish our assessment of training sources by presenting statistics on DoD courses attended only by civilians. Figure 2-6 shows there were 212 such courses in FY93 from which 3,750 civilians graduated. A complete listing of these courses is available upon request.

Air Force reported the most courses with only civilian graduates (144), while Army remained the training source for the largest number of civilians, with 1,708 students in 55 courses.

The single largest provider of courses with only civilian students is Army Management Engineering College. Twenty-six such courses were attended by 631 civilians in FY93.

FIGURE 2-6

FY93 DoD COURSES
WITH CIVILIAN GRADUATES ONLY

NUMBER OF COURSES	
ARMY	55
USAF	144
NAVY	8
OTHER	5
TOTAL	212

BIGGEST PROVIDER?

ARMY MGMT ENGR COLLEGE

- 26 COURSES
- 631 GRADS
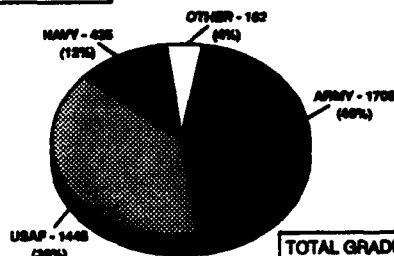
INCLUDES 736 NON-DoD CIVILIANS ATTENDING SUCH COUSES AS:

- HAZARDOUS DEVICES TRAINING 334
- REHAB TRNG INSTRUCTOR 174
- ADVANCED INDUSTRIAL SECURITY MGMT 107
- COUNTERNARCOTICS NARCO-TERRORISM PERSONAL PROTECTION 70

TOTAL GRADUATES: 3750

SOURCE: DMDC TRAINING OUTPUT DATA FILE

TRAINING ATTENDED BY NON-DoD CIVILIANS

Figure 2-6 also shows there were 736 non-DoD civilians among these 3,750 civilian graduates. We found that 685 of the 736, or 93 percent, attended three main categories of courses:

• Federal Bureau of Investigation sent the largest contingent (334) to the Hazardous Devices Basic and Refresher Courses at Army's Ordnance, Missile & Munitions Center & School, Redstone Arsenal, AL. FBI reimbursed DoD $865,000 in FY93, which covered school salaries and materials, ammunition exploded during training and a percent of installation base operations cost.

• Federal, state and local police agencies graduated 244 people from the Counter-Narcotics Narco-Terrorism Personal Protection Course and Rehabilitation Training Instructor Course, both conducted by Army Military Police School, Fort McClellan, AL. Courses were primarily taught by mobile training teams as part of the national strategy on the war on drugs. Non-DoD trainees do not reimburse DoD. This training is funded under authority established by Section 1004 [Additional Support for Counterdrug Activities] of the Defense Authorization Act of 1991.

• Defense Security Institute (DSI) graduated 107 cleared contractors who work with classified documents from its Advanced Industrial Security Management Course. DSI is not permitted to accept reimbursement under its charter.

CHAPTER 3: COURSE CONTENT

This chapter defines how we functionally categorize training courses offered by DoD institutions and shows how many DoD courses in FY93 are offered in each category.

In view of the large number and variety of DoD courses that civilians attend, it was necessary to develop a taxonomy that combines functionally similar courses into a smaller, more meaningful number of categories. We examined the title and description of the 2,109 courses offered in FY93, then generated a list of 11 broad categories that serve to group courses of similar subject matter.

DMDC's Training Output Data File is the major source of course descriptions for the 1,990 courses offered by the three services. We contacted the other DoD training institutions to obtain descriptions of their 119 courses attended by DoD civilians. Major course concentration for Army is in the area of engineering and logistics, Navy in repair and maintenance, while Air Force is primarily oriented toward two categories--repair and maintenance; and communications, electronics and automated data processing (ADP). Over 80 percent of courses offered by 12 other DoD schools fall within four categories: personnel and administration; communications, electronics and ADP; logistics; and intelligence and physical security.

TABLE 3-1

COURSE CATEGORIES

CATEGORY	SUBJECT EXAMPLES
1. SCIENCE & ENGINEERING	MATHEMATICS, PHOTO TECHNOLOGY, GENERAL & SYSTEMS ENGINEERING, MAPPING, CHARTING, GEODESY, COMPUTER ENGINEERING, PROJECT MANAGEMENT, OPERATIONS RESEARCH
2. MEDICAL	BASIC HEALTH RISK ASSESSMENT, OCCUPATIONAL HEALTH, VISION CONSERVATION, HEARING CONSERVATION
3. RESOURCE MANAGMENT	FINANCIAL ADMINISTRATION, ACCOUNTING, MANPOWER, BUDGET AND PROGRAM ANALYSIS
4. LOGISTICS	CONTRACTING, ACQUISITION, LOGISTICS, TRANSPORTATION, SUPPLY, DEPLOYMENT, FREIGHT, FOOD SERVICE, QUALITY ASSURANCE, AMMUNITION SURVEILLANCE AND HANDLING
5. PERSONNEL & ADMINISTRATION	CIVIL RIGHTS, PERSONNEL MANAGEMENT, STAFFING, EEO, PUBLIC AFFAIRS, RECORDS MANAGEMENT, EDITORIAL ASSISTANCE
6. COMMUNICATIONS, ELECTRONICS & ADP	ELECTRONIC EQUIPMENT INSTALLATION & MANAGEMENT, DIGITAL COMPUTER MECHANIC, ELECTRICIAN, INSTRUMENT MECHANIC, COMPUTER & SYSTEMS PROGRAMMING
7. EDUCATION	TRAIN THE TRAINER, GRADUATE EDUCATION, LEADERSHIP DEVELOPMENT, TOTAL QUALITY MANAGEMENT
8. LEGAL	CLAIMS, TORT LITIGATION, ENVIRONMENTAL LAW AND CONTRACTS, PROCUREMENT FRAUD
9. INTELLIGENCE & SECURITY	FIRE, POLICE, FINGERPRINTING, SECURITY, SAFETY, INTELLIGENCE, FORENSICS, CRYPTOLOGY
10. VEHICLE & EQUIP OPERATION	MACHINERY OPERATION, AIR TRAFFIC CONTROL, SHIPLOADING AND STOWAGE
11. REPAIR & MAINTENANCE	WEAPON SYSTEMS, VEHICLE, EQUIPMENT REPAIR & MAINTENANCE, AND MAINTENANCE MANAGEMENT

SOURCE: DITRA EXAMINATION OF DoD COURSE DESCRIPTIONS

Tabel 3-1 lists the 11 functional course categories that resulted from our review of DoD course descriptions. The examples help to define these categories and clarify our taxonomy for assigning types of courses to the various categories.

CONTENT BY DoD COMPONENT

The DoD component distribution of 2,109 courses attended by civilians in FY93 is shown in Table 3-2. A detailed listing of course categorization by DoD component is available upon request. We find the following trends at service training institutions:

• about 25 and 21 percent of Army courses are in the areas of engineering and logistics, respectively. Two categories--resource management and communications, electronics and ADP--each account for 16 percent.

• over half (52 percent) of Navy courses are categorized as repair and maintenance. Intelligence and physical security courses comprise the next highest concentration. These 111 courses constitute 18 percent of Navy total.

• repair and maintenance courses make up 26 percent of all Air Force training of civilians. This is followed by communications, electronics and ADP, at 22 percent.

• Navy and Air Force conduct 91 percent of all DoD repair and maintenance courses attended by civilians, while Army and Air Force together offer 87 percent of all resource management and 82 percent of all logistics courses.

TABLE 3-2

COURSE CONTENT BY DoD COMPONENT

FY93 COURSE CATEGORY	FY93 NUMBER OF COURSES				
	ARMY	NAVY	USAF	OTHER	TOTAL
SCIENCE & ENGINEERING	182	10	72	11	275
MEDICAL	32	0	0	0	32
RESOURCE MANAGEMENT	57	9	52	7	125
LOGISTICS	153	29	80	23	285
PERSONNEL/ADMIN	61	0	28	27	116
COMMUC'S, ELECTRONICS & ADP	58	65	141	24	288
EDUCATION	36	38	28	4	106
LEGAL	22	7	10	0	39
INTEL & PHYSICAL SECURITY	51	111	43	22	227
VEHICLE/EQUIP OPERATION	23	39	10	1	73
REPAIR & MAINTENANCE	48	330	165	0	543
TOTAL	723	638	629	119	2,109

COURSE CONCENTRATIONS:
ARMY ... ENGINEERING & LOGISTICS
NAVY ... REPAIR & MAINT
USAF ... REPAIR & MAINT; COMMUNIC'S, ELEC & ADP

SOURCE: DMDC TRAINING OUTPUT DATA FILE FOR ARMY, NAVY, AIR FORCE
INPUT FROM INSTITUTIONS FOR OTHER DoD ACTIVITIES

TABLE 3-3

COURSE CONTENT AT OTHER DoD SCHOOLS

NUMBER OF COURSES BY SCHOOL

COURSE CATEGORY	AFMC	DeCA	DEOMI	DIS	DISA	DMS	DPI	DRMI	DSI	DSMC	DVIS	IRMC	NDU*	TOTAL
SCIENCE & ENGINEERING					1	7				3				11
MEDICAL														
RESOURCE MANAGEMENT							1			4		2		7
LOGISTICS		2			3					17		1		23
PERSONNEL & ADMIN			2	10	12						3			27
COMMUNICATIONS, ELECTRONICS & ADP					12	1			1			10		24
EDUCATION					1				2			1		4
LEGAL														
INTEL & PHYSICAL SECURITY	1						12		9					22
VEHICLE/EQUIP OPN						1								1
REPAIR & MAINTENANCE														
TOTAL	1	2	2	10	29	8	12	1	12	24	3	14		119

CODES:
AFMC - ARMED FORCES MEDICAL INTEL CENTER
DeCA - DEFENSE COMMISSARY AGENCY
DEOMI - DEFENSE EQUAL OPPORT MGMT INST
DIS - DEFENSE INFORMATION SCHOOL
DISA - DEFENSE INFORMATION SYSTEMS AGENCY
DMS - DEFENSE MAPPING SCHOOL
DPI - DEFENSE POLYGRAPH INSTITUTE

DRMI - DEFENSE RESOURCE MGMT INSTITUTE
DSI - DoD SECURITY INSTITUTE
DSMC - DEFENSE SYSTEMS MGMT COLLEGE
DVIS - DEFENSE VISUAL INFORMATION SCHOOL
IRMC - INFORMATION RESOURCES MANAGEMENT COLLEGE
NDU - NATIONAL DEFENSE UNIVERSITY
(INCLUDES NATIONAL WAR COLLEGE, INDUSTRIAL COLLEGE OF ARMED FORCES, IRMC, ARMED FORCES STAFF COLLEGE, INSTITUTE OF HIGHER DEFENSE STUDIES)

SOURCE: REPORTED TO DITRA BY THESE SCHOOLS
* NDU - NO RESPONSES RECEIVED EXCEPT FROM IRMC

CONTENT AT OTHER DoD SCHOOLS

We display in Table 3-3 the content distribution of 119 courses offered by 12 other DoD training institutions. Here are the major findings:

• about 80 percent of all training (96 courses) is found in four course categories:

(1) personnel and administration (27 courses, 23 percent of total)

(2) communications, electronics and ADP (24 courses, 20 percent of total)

(3) logistics (23 courses, 19 percent of total)

(4) intelligence and physical security (22 courses, 18 percent of total)

• Defense Information Systems Agency and Defense Systems Management College together account for almost half (45 percent) of all training.

• five institutions combine for less than 10 percent of all courses: Defense Visual Information School, Defense Equal Opportunity Management Institute, Defense Commissary Agency, Armed Forces Medical Intelligence Center and Defense Resources Management Institute.

CHAPTER 4: FREQUENCY

This chapter contains data on the total size of the DoD civilian workforce, the number who receive training and how much training they receive.

The Defense Manpower Data Center (DMDC) provided data on the total size of the civilian workforce. This includes all US and overseas (CONUS and OCONUS) direct hire employees in a paid, active status as of 30 September of the fiscal year in question. It does not include intelligence activities or foreign nationals. Data on work categories, number of employees receiving training and amount of training they receive was furnished by OPM. A list of the DoD components who responded to OPM and whose data is included in this analysis is at Appendix B. Data is complete through FY92, as many DoD elements had not completed their FY93 civilian training compilation at the time of our study.

The training workload statistics we will present are based on the number of events and training hours DoD components reported to OPM. They do not reflect the training requirements of any particular DoD component or training institution.

CIVILIAN TRAINING TEMPO BENCHMARKS

We developed two benchmarks for measuring civilian training tempo:

- **percent of employees who received training**. This is obtained by dividing each fiscal year's civilian end strength (as reported by DMDC) by the number of civilians who attended training events of eight hours or longer (as reported by DoD components to OPM).

- **average annual training hours per trainee**. This benchmark is generated using two training workload statistics DoD components report to OPM. We divided the total number of short- and long-term training hours by the number of people trained.

Our major findings are that although the civilian workforce declined four percent to about 972,000 people between FY90-92, civilian training tempo remained relatively constant: about half the workforce receives training each year, with each trainee receiving about 55 hours of annual training. This is eight percent above the 51 annual training hours received by the total federal workforce.

FIGURE 4-1

FY90-93 CIVILIAN WORKFORCE TRENDS

(END STRENGTH IN THOUSANDS)
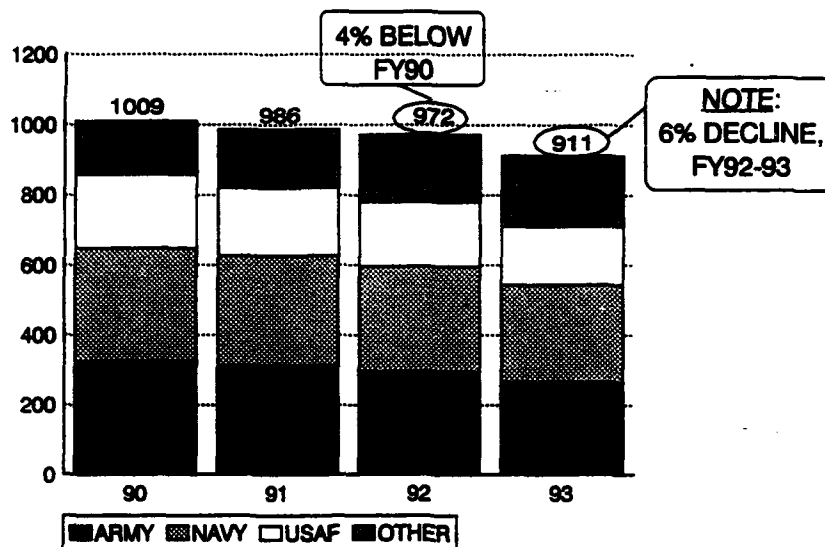
SOURCE: DIRECT HIRE CONUS & OCONUS WORKERS IN PAID, ACTIVE STATUS,
AS OF 30 SEP XX (PER DMDC)

SIZE OF THE WORKFORCE

Figure 4-1 shows a consistent downward trend in DoD civilian employment. There were about 972,000 DoD civilians in FY92, a four percent drop from FY90. The pace of this decline accelerated to six percent between FY92-93. We expect this trend to continue, since the President's February 1994 budget request to Congress calls for reducing the DoD civilian full time equivalent workforce to 873,000 by FY95.

FIGURE 4-2

FY92 DoD CIVILIANS BY COMPONENT

OTHER *
191,036
(20%)

USAF
185,241
(19%)

ARMY
294,941
(30%)

NAVY
300,441
(31%)

TOTAL:
971,659
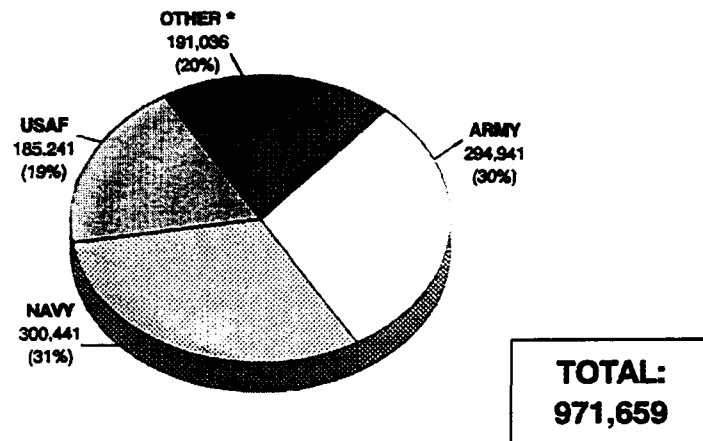
SOURCE: DIRECT HIRE CONUS & OCONUS WORKERS
IN PAID, ACTIVE STATUS AS OF 30 SEP 92
(PER DMDC)

WORKFORCE DISTRIBUTION

Figure 4-2 depicts the FY92 distribution of civilians among major DoD components. Army and Navy employ the largest number, about 300,000 each. The "Other" category comprises 20 percent of the workforce, with seven components accounting for 92 percent of that 191,036:

Defense Logistics Agency	64,766
National Guard Bureau	53,698
Defense Commissary Agency	17,788
DoD Dependents Schools	14,099
Defense Finance & Accounting Service	10,672
Defense Mapping Agency	7,924
Defense Contract Audit Agency	5,876

TABLE 4-1

DoD COMPONENT WORKFORCE TRENDS
(IN THOUSANDS)

DoD COMPONENT	FY 90	FY 91	FY 92	FY 93	% 90-93
ARMY	325	313	295	263	-19%
NAVY	323	313	300	279	-14%
USAF	210	194	185	168	-20%
OTHER	151	166	191	200	+32%
TOTAL	1009	986	972	911	-10%

SOURCE: DIRECT HIRE CONUS & OCONUS WORKERS IN PAID, ACTIVE STATUS,
AS OF 30 SEP XX (PER DMDC)
NOTE: NUMBERS MAY NOT ADD DUE TO ROUNDING

WORKFORCE TRENDS BY DoD COMPONENT

The three services experienced significant civilian staffing reductions from FY90-93, as shown in Table 4-1. Army civilian workforce decreased by 19 percent, Navy by 14 percent and Air Force by 20 percent.

Other DoD components experienced a 32 percent workforce increase. A significant cause for this growth is the transfer and consolidation of many service functions under defense agency control. For example, the Defense Finance & Accounting Service was established in January 1991 and had a FY93 workforce of 24,043. Similarly, the Defense Commissary Agency was formed in October 1990. Its FY93 workforce amounted to 17,692.

FY92 EMPLOYEES BY WORK CATEGORY

We also examined the total civilian workforce size in terms of OPM work categories. OPM identifies three work categories in its guidance on submitting annual reports of civilian training on OPM Form 1524 [Annual Statistical Summary of Training Data]:

- executive - a Senior Executive Service (SES) level position or equivalent

- manager and supervisor - as defined by the agency or Supervisory Grade Evaluation Guide

- nonsupervisor - as defined by the agency.

Figure 4-3 displays the FY92 percentage of civilians in each category. This was determined by extracting the totals reported to OPM by participating DoD components, then prorating these to the actual September 1992 end strength provided by DMDC. Nonsupervisors make up the bulk of the workforce, while executives account for only 0.15 percent.

FIGURE 4-3

FY 92 EMPLOYEES BY WORK CATEGORY

EXECUTIVES
1,482
(0.15%)

MANAGERS/
SUPERVISORS
148,016
(15.24%)

NON-SUPERVISORS
822,161
(84.61%)
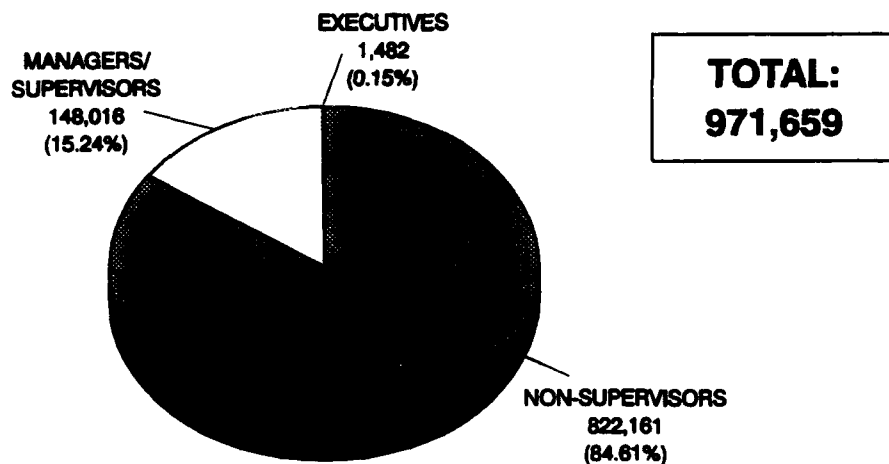
TOTAL:
971,659

SOURCE: WORK CATEGORY PERCENTAGES REPORTED TO OPM BY DoD COMPONENTS FOR PERIOD ENDING 30 SEP 92, PRO RATED TO ACTUAL 30 SEP 92 DMDC STRENGTH TOTALS FOR DIRECT HIRE CONUS & OCONUS WORKERS IN PAID, ACTIVE STATUS

BENCHMARK I

PERCENT OF EMPLOYEES WHO RECEIVED TRAINING

BY DoD COMPONENT

The FY90-92 DoD component trends for the first benchmark are shown in Figure 4-4. The total DoD percent of civilians trained remained relatively constant. The 49 percent who received training in FY92 equates to about 475,000 employees. There are significant differences among DoD components.

Army, Air Force and other DoD report downward trends, while Navy is the only component to report an upward trend. Navy's 17 percent increase coincides with mandatory FY92 sexual harassment training ordered for all Navy employees. Navy suggested its FY91 data is questionable but is unable to make corrections. Army reported an 18 percent decline in percent of workforce trained, yet its FY92 level of 47 percent is significantly higher than the 33 percent reported by Air Force.

FIGURE 4-4

PERCENT OF EMPLOYEES TRAINED
BY DoD COMPONENT
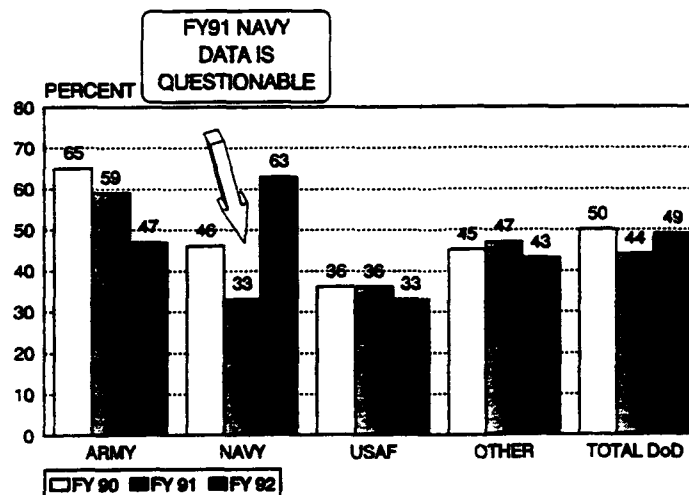
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

BENCHMARK I (continued)

PERCENT OF EMPLOYEES WHO RECEIVED TRAINING

BY WORK CATEGORY

We showed in Figure 4-3 that nonsupervisors constitute about 85 percent of DoD's FY92 workforce, managers & supervisors account for about 15 percent and executives 0.15 percent. We used our first benchmark to examine how training was distributed across work categories between FY90-92.

As shown in Figure 4-5, an average of about 60 percent of managers and supervisors were trained in each of these years. This is 10 percentage points or 20 percent higher than the DoD-wide average. In all three years executives and non-supervisors experienced relatively equal training rates -- just below 50 percent. The percent of workforce trained in each work category remained fairly constant over the three years.

FIGURE 4-5

PERCENT OF EMPLOYEES TRAINED
BY WORK CATEGORY
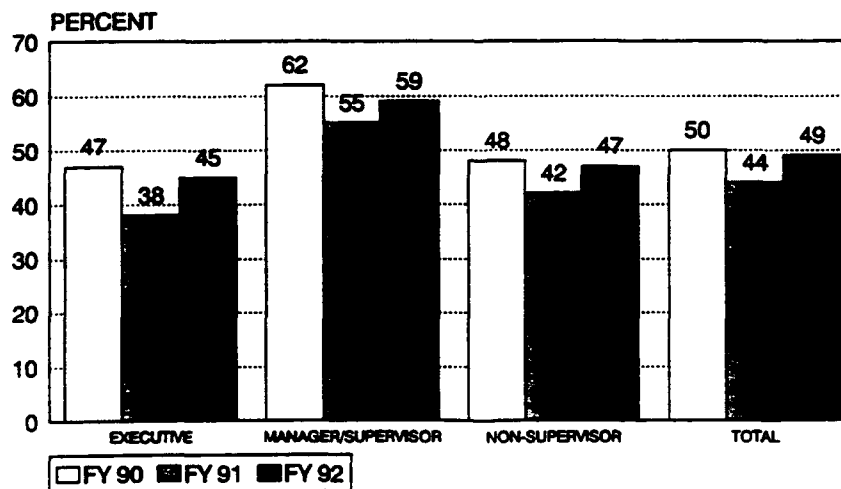
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

FIGURE 4-6

FY92 TRAINING HOURS
BY DoD COMPONENT *

TRAINING HOURS IN THOUSANDS

% CHANGE, FY90-92			
COMPONENT	SHORT TERM	LONG TERM	TOTAL
ARMY	-24%	-56%	-26%
NAVY	-15	-6	-15
USAF	-11	+17	-10
OTHER	+13	-26	+12
TOTAL	-12%	-37%	-13%

■SHORT TERM TRAINING
■LONG TERM TRAINING
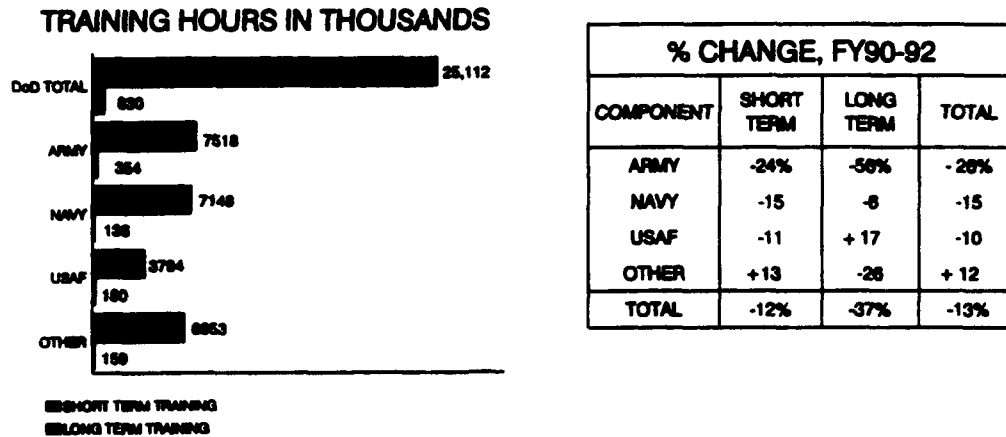
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS
* SHORT TERM IS 1-120 DAYS, LONG TERM IS 121 DAYS OR MORE

TRAINING HOURS BY COMPONENT

We showed in Chapter 2 that 98 percent of all DoD courses attended by DoD civilians were what OPM defines as short-term, or at least eight hours but less than 121 days in duration. Long-term training is 121 days or more. Figure 4-6 depicts the fact that in FY92 DoD components accounted for over 25 million hours of short-term and 830,000 hours of long-term training.

The distribution of these total training hours among all components closely follows the workforce distribution presented in Figure 4-2 on page 20. For example, Army accounted for 30 percent of the FY92 workforce and Figure 4-6 shows Army civilians attended about 7.9 million hours of DoD FY92 training, or 30 percent of all training hours.

We also list the FY90-92 percentage change in short-term, long-term and total training hours. The three services experienced from 10 to 26 percent reductions. These levels are larger than their civilian workforce reductions summarized in Table 4-1 on page 21. The other DoD components received 12 percent more training hours. This growth is consistent with the 26 percent increase in size of the Other DoD workforce.

BENCHMARK II

TRAINING HOURS PER TRAINEE

BY DoD COMPONENT

Figure 4-7 displays our second benchmark, training hours per trainee. The DoD-wide average remained relatively steady between FY90-92, dropping from 59 to 55 hours. DoD components varied substantially from this average. Army and Air Force had similar levels, while Navy dropped significantly to 38 hours per trainee in FY92. This could be due to the fact that mandatory eight hour sexual harassment training occurred in FY92.

The Other DoD category is consistently well above the DoD average, ranging from 82 to 90 hours per trainee over this three year period. This is supported by the fact that other DoD

components send more people to long-term training events. In FY92, for example, other DoD components accounted for 395 of 787 DoD people in long-term training, or about half the total. The National Guard Bureau reported 361 long-term trainees, or 91 percent of the other DoD total.

Compared to the total federal workforce, the average DoD trainee received three more hours of training in FY91 and four more hours in FY92. The general trend of decreasing average training hours for FY91 and FY92 seen in the total DoD data is mirrored in the total federal data. We were unable to obtain total federal hours for FY90.

FIGURE 4-7

AVERAGE TRAINING HOURS PER TRAINEE BY DoD COMPONENT
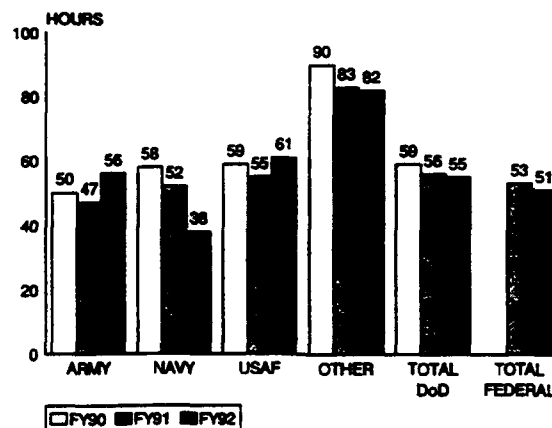
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

FIGURE 4-8

AVERAGE TRAINING HOURS PER TRAINEE
BY WORK CATEGORY

HOURS

7 EXECUTIVES IN LONG TERM TRAINING (393)

☐ FY90 ■ FY91 ■ FY92
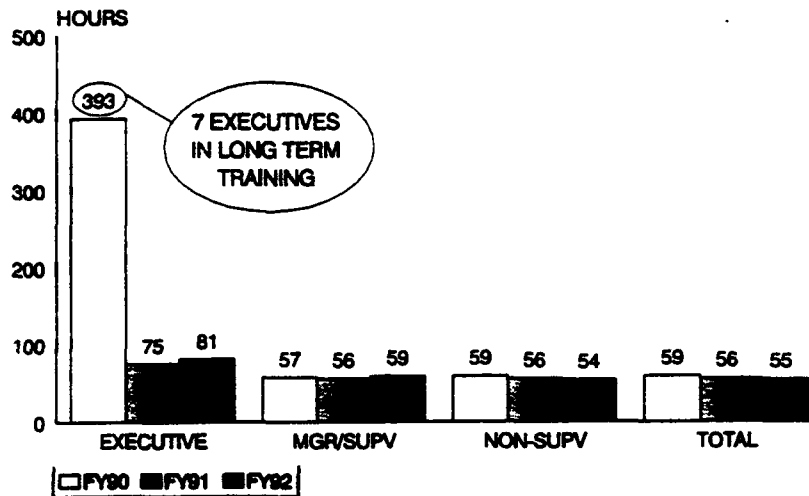
SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS

BENCHMARK II (continued)

TRAINING HOURS PER TRAINEE

BY WORK CATEGORY

As shown in Figure 4-8, executives received the highest average number of training hours in all years, while managers & supervisors and nonsupervisors were relatively equal. The unusually high 393 hour average for executives in FY90 is due to DoD components reporting seven executives in long-term training. During that year,

for example, DoD sent two civilians to the Sloan Fellowship Program at the Massachusetts Institute of Technology, one to Princeton University's Mid-Career Program and one to Indiana University's Education for Public Management Program. These programs were all ten to twelve months long.

FIGURE 4-9

NUMBER OF FY93 COURSES BY COURSE LENGTH IN DAYS

COURSE LENGTH (DAYS)	NUMBER OF COURSES
1	37
2	43
3	105
4	78
5	468
6	7
7	13
8	41
9	30
10	228
11	18
12	173
13	15
14	16
15	52
16	16
17	10
18	23
19	65
20	42
21	6
22	6
23	8
24	13
25	27
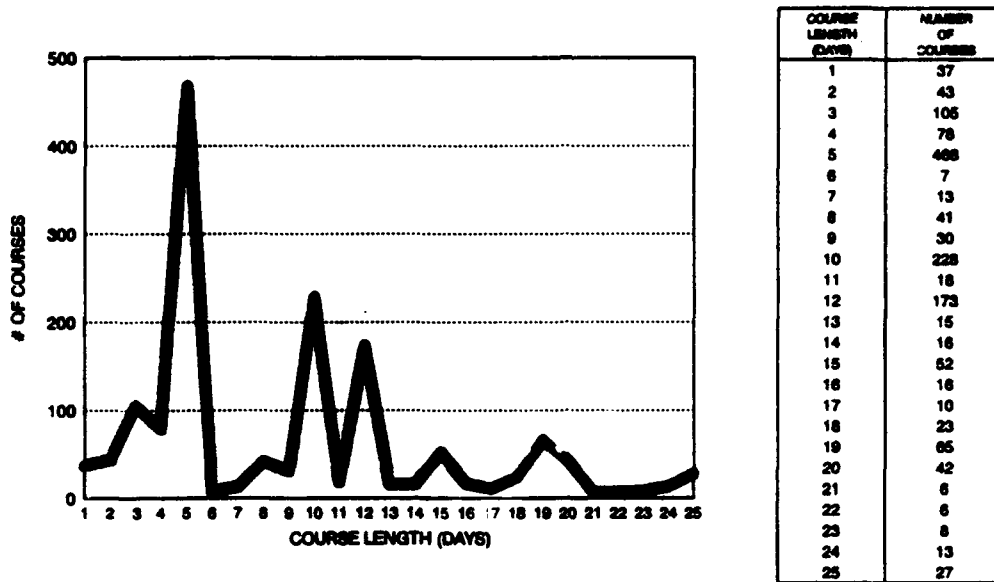
SOURCE: DMDC TRAINING OUTPUT FILE AND DoD SCHOOLS

COURSE LENGTH FREQUENCY DISTRIBUTION

Figure 4-9 displays the FY93 frequency of DoD courses by course length. The most frequent course length is five days (468 occurrences), with secondary peaks at 10 days (228) and 12 days (173). Course lengths beyond 25 days were not shown since the number of occurrences is insignificant.

We examined the FY90-92 resources required to fund the civilian training identified above, displaying cost estimates by *source of training, cost element and DoD component.* Our analysis also addressed significant FY90-92 cost trends. We discuss net cost and total cost. Net cost is defined as total cost minus the salary cost of civilians while they attend training. We use this differentiation because salaries are funded outside training resource channels and must be paid even if people do not attend training. Total cost reflects DoD's total resource investment during the training process. All costs have been converted to constant FY94 dollars. Cost estimating techniques are described at Appendix E.

SOURCE OF TRAINING

This analysis replicates the elements we previously used in Chapter 2, Source. The federal sector covers costs incurred for training conducted within the DoD component, that is, training controlled by and given to its own workers. We also include training provided by federal activities other than the one in which the trainee is employed. The non-federal sector covers:

- training by a college, university or educational institution, professional society or association

- training provided by private, profit-making concerns, to include individual contractors, commercial concerns and other private organizations.

It is important to note the difficulty in trying to compare cost by training source. We assume, for example, that the registration and fees DoD pays to colleges & professional associations and to private training sources enable these sources to recover all their overhead costs. These costs include the salaries of administrative and support staffs plus such infrastructure expenses as heating, electricity, printing and communications. We expect that non-DoD federal training sources include all their overhead costs in their registration fees, as well. You will learn that cost for training provided within DoD component covers only a portion of these overhead costs, namely, the labor cost of administrative and support staff. Infrastructure costs for training provided within DoD component are neither documented nor reported, and thus are not included in our cost analysis.

FIGURE 5-1

FY 92 TRAINING COST BY SOURCE
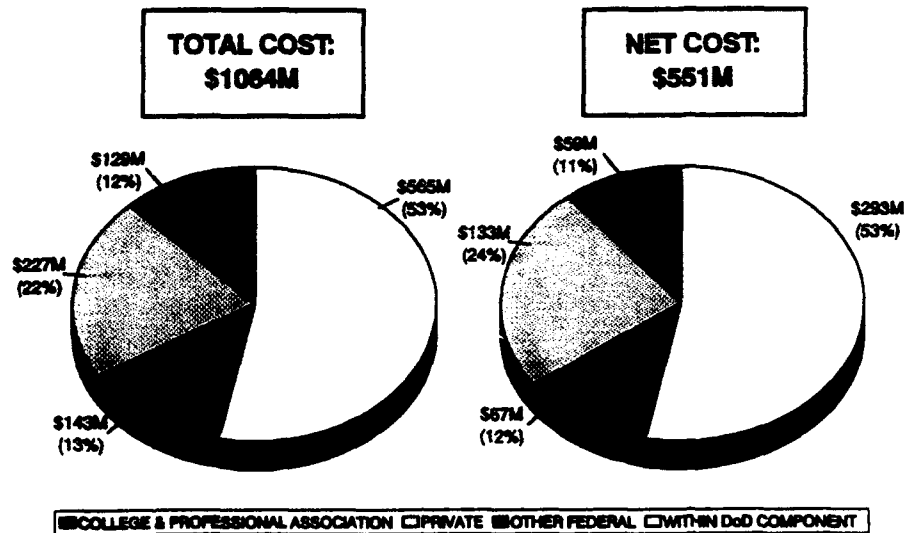
TOTAL COST: $1064M

NET COST: $551M

$129M (12%)
$565M (53%)
$227M (22%)
$143M (13%)

$59M (11%)
$293M (53%)
$133M (24%)
$67M (12%)

COLLEGE & PROFESSIONAL ASSOCIATION PRIVATE OTHER FEDERAL WITHIN DoD COMPONENT

SOURCE: DATA REPORTED TO OPM BY DoDCOMPONENTS, MODIFIED BY DoD DEFLATORS
AND DMDC AVERAGE SALARY TOTALS
NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING

FY92 TRAINING COST BY SOURCE

Figure 5-1 depicts a FY92 snapshot of total and net training cost by source. Training provided within DoD component is the largest category, amounting to just over half (53 percent) of both total and net cost. Training provided by private, profit-making sources represents about one-fifth of total cost, or $227 million, and 24 percent ($133 million) of net cost. The two smallest sources of civilian training are other federal and college and professional associations. Together these amount to $272 million, or 26 percent of total cost. They account for $126 million (23 percent) of net cost.

FIGURE 5-2
TRENDS IN TOTAL COST BY SOURCE
(FY 94 DOLLARS IN MILLIONS)

FY 92 AMOUNT IN PARENTHESES

FY 90-92 TRENDS:

• WITHIN DoD COMPONENT . . . . . . -11%
• OTHER FEDERAL . . . - 4%
• PRIVATE . . . . -10%
• COLLEGE & PROF ASSOC . . . . -38%

TOTAL: -13%

COLLEGE & PROFESSIONAL ASSOCIATION (129)

PRIVATE (227)

OTHER FEDERAL (143)

WITHIN DoD COMPONENT (565)

SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS, MODIFIED BY DoD DEFLATORS AND DMDC AVERAGE SALARY TOTALS
NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING
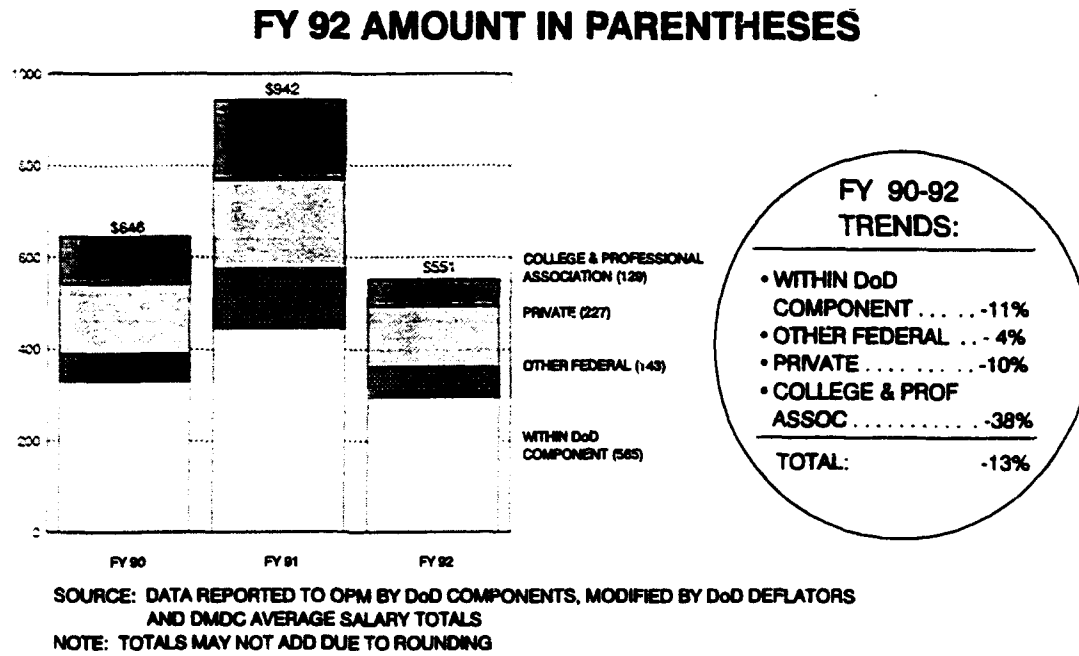
TOTAL COST BY SOURCE

Figure 5-2 shows FY90-92 variations in total cost. While the cumulative cost fell by 13 percent, funds spent on training provided through colleges & professional associations declined by a much higher rate of 38 percent. Total cost of training provided through the other three sources each fell at rates below the cumulative 13 percent reduction.

FIGURE 5-3
TRENDS IN NET COST BY SOURCE
(FY 94 DOLLARS IN MILLIONS)
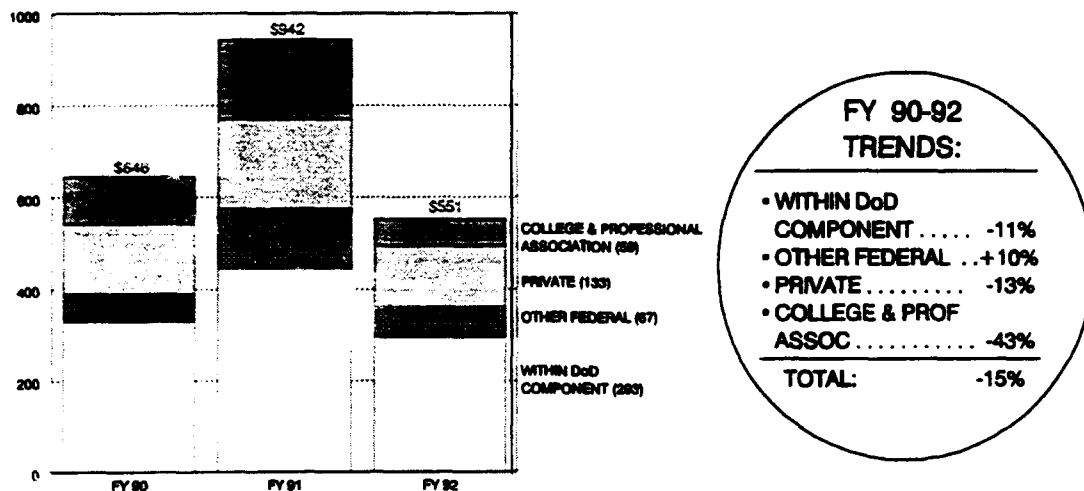
FY 92 AMOUNT IN PARENTHESES

SOURCE: DATA REPORTED TO OPM BY DoD COMPONENTS, MODIFIED BY DoD DEFLATORS
AND DMDC AVERAGE SALARY TOTALS
NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING

NET COST BY SOURCE

Figure 5-3 depicts components of the three year, 15 percent drop in net cost. Funding for college & professional association training fell at a much greater 43 percent rate. Similar to total cost, the net cost of training provided within DoD component and through private sources fell at rates below the 15 percent overall decrease. The net cost of training provided through other federal sources, however, actually grew by 10 percent.

COST ELEMENT

There are two general elements that DoD components report to OPM-- agency expenses and trainee expenses.

(1) **Agency Expenses.** These consist of:

•• Staff salaries for agency workers who are civilian personnel instructors (direct costs), provide administrative and clerical support or are in the GS-235 [Educational Development Specialist] or equivalent job series (indirect costs).

•• Externally purchased products or services, which include needs assessments and evaluations; course development materials, like pilot courses, that are handed off to the DoD component; off-the-shelf course packages; and course-specific materials.

(2) **Trainee Expenses.** There are three items in this category:

•• trainee salary and benefits of civilians while they are attending training. We generated these cost estimates using the techniques described in Appendix E. DoD components do not report these costs to OPM.

•• Travel and per diem costs associated with the trainee's travel to and from a training site and with maintaining the trainee at that site.

•• Tuition and other costs paid by a DoD component to the provider of training. These include the trainee's tuition, registration fees, books and other materials and supplies.

We did not include infrastructure costs in our estimates. These can be broadly categorized in two areas. First are base operation support costs to maintain a training institution, such as heating, electricity and communications for classrooms and other academic facilities. Second are indirect costs other than those identified in agency expenses, above. These could include O&M costs incurred for administrative training staffs at major command and subordinate levels that perform such functions as developing programs of instruction and lesson plans, plus scheduling and monitoring institution training attended by DoD civilians.

We will address the issue of identifying and quantifying infrastructure and other indirect costs not already reported to OPM in Chapter 7, Unanswered Questions.

COST BY DoD COMPONENT

We will present DoD component data in four categories -- Navy [including US Marine Corps], Air Force, Army and Other DoD. This latter category includes those that reported their FY90-92 annual civilian training workload and cost to OPM on OPM Form 1186 (Personnel Engaged in Agency Training Activities) and OPM Form 1524 (Annual Statistical Summary of Training Activities). Appendix B lists all DoD components that reported to OPM from FY90-92.

TABLE 5-1

TOTAL DoD COST

(CONSTANT FY94 $ IN MILLIONS)

COST ELEMENT	FY 90 *	FY 91 *	FY 92 *
AGENCY STAFF SALARY & BENEFITS			
1. INSTRUCTORS	$ 85	$ 171	$ 58
2. EDUCATIONAL DEVELOPMENT SPECIALISTS	89	73	77
3. ADMINISTRATIVE & CLERICAL	54	47	50
EXTERNALLY PURCHASED PRODUCTS & SERVICES	28	15	13
OTHER AGENCY TRAINING COSTS	8	1	12
TRAINEE TRAVEL & PER DIEM	156	183	123
TRAINEE TUITION & OTHER	269	442	220
NET COST:	$ 646	$ 942	$ 551
PLUS: TRAINEE SALARY & BENEFITS	572	477	513
TOTAL COST:	$ 1,218	$ 1,419	$ 1,064

* MAY NOT ADD DUE TO ROUNDING

FY90-92 COMPARISON

CATEGORY	CHANGE	% CHANGE
TRAINING HOURS	- 3.8M	- 12%
NET COST	-$ 95M	- 15%
TOTAL COST	-$154M	- 13%

FY92 COSTS

• COST PER INDIVIDUAL TRAINED:
- NET $1,161
- TOTAL $2,242
• COST PER TRAINING HOUR:
- NET $21
- TOTAL $41

TOTAL DoD COST

The cost and workload comparison in Table 5-1 shows that while the total number of training hours fell by 3.8 million, a 12 percent decline, the net and total costs decreased at slightly greater rates of 15 and 13 percent. Examining individual cost elements we see that:

• trainee salary constitutes about half the total cost in FY90 and FY92.

• in FY92 the $220 million trainee tuition cost accounts for 40 percent of net cost

• about $123 million was spent on trainee travel and per diem, or 22 percent of net cost.

Each DoD component will be discussed separately. This will include component comparisons to DoD-wide average net and total cost per individual trained [$1,161 and $2,242], and net and total cost per training hour [$21 and $41].

TABLE 5-2

NAVY COST

(CONSTANT FY94 DOLLARS IN MILLIONS)

COST ELEMENT	FY 90 *	FY 91 *	FY 92 *
AGENCY STAFF SALARY & BENEFITS			
1. INSTRUCTORS	$33	$133	$23
2. EDUCATIONAL DEVELOPMENT SPECIALISTS	17	20	19
3. ADMINISTRATIVE & CLERICAL	11	0	9
EXTERNALLY PURCHASED PRODUCTS & SERVICES	9	0	2
OTHER AGENCY TRAINING COSTS	0	0	12
TRAINEE TRAVEL & PER DIEM	71	88	26
TRAINEE TUITION & OTHER	172	342	79
NET COST	$312	$561	$169
PLUS: TRAINEE SALARY & BENEFITS	165	106	144
TOTAL COST	$477	$667	$313

* MAY NOT ADD DUE TO ROUNDING

NAVY BELIEVES FY91 COSTS REPORTED TO OPM ARE ERRONEOUS

FY90-92 COMPARISON

CATEGORY	CHANGE	% CHANGE
TRAINING HOURS	- 1.3M	- 15%
NET COST	- $143M	- 46%
TOTAL COST	- $164M	- 34%

SHIFT FROM EXTERNAL TO FEDERAL TRAINING EVENTS

FY92 COST

- COST PER INDIVIDUAL TRAINED:
  - NET .... $ 888 > MUCH BELOW DoD AVERAGE
  - TOTAL ...... $1,645 >
- COST PER TRAINING HOUR:
  - NET .... $ 23 > ABOVE DoD AVERAGE
  - TOTAL ...... $ 43 >

NAVY COST

Navy costs are summarized in Table 5-2. The FY91 net and total costs are significantly higher than FY90 and FY92. Navy has reevaluated its prior year training submissions to OPM and believes its FY91 report contains erroneous data. For this reason we will only discuss cost comparisons between FY90 and FY92.

Navy's net and total costs dropped by 46 and 34 percent. This greatly exceeded the 15 percent decline in number of training hours. Navy has also adjusted its mix of external to internal training sources. The number of training events conducted by Navy and other federal activities rose 15 percent to 250,000. Training events provided through colleges, professional associations and private sources fell 23 percent to 109,000.

Navy's net and total training cost per hour are slightly (10 and five percent) higher than the DoD-wide average. On the other hand, Navy's $888 net cost per individual trained is 24 percent below the $1,161 DoD-wide average and the $1,645 total cost per individual trained is 27 percent below the DoD-wide average.

We showed in Chapter 2 that Navy offers its 638 courses at the largest number of training locations (66). There are also many instances where Navy conducts the same course at up to eight different training institutions. Navy's dispersed training network apparently means fewer civilians have to be on temporary duty travel to receive training. This is supported by the fact that in FY92 Navy's $26 million travel and per diem cost amounted to 15 percent of net cost, compared with the DoD-wide average of 22 percent.

TABLE 5-3

AIR FORCE COST

(CONSTANT FY94 $ IN MILLIONS)

COST ELEMENT	FY 90 *	FY 91 *	FY 92 *
AGENCY STAFF SALARY & BENEFITS			
1. INSTRUCTORS	$ 15	$ 15	$ 10
2. EDUCATIONAL DEVELOPMENT SPECIALISTS	13	13	19
3. ADMINISTRATIVE & CLERICAL	10	11	5
EXTERNALLY PURCHASED PRODUCTS & SERVICES	0	0	0
OTHER AGENCY TRAINING COSTS	0	0	0
TRAINEE TRAVEL & PER DIEM	21	16	13
TRAINEE TUITION & OTHER	29	26	26
NET COST	$ 88	$ 81	$ 73
PLUS: TRAINEE SALARY & BENEFITS	85	76	79
TOTAL COST	$ 173	$ 157	$ 152

* MAY NOT ADD DUE TO ROUNDING

FY90-92 COMPARISON

CATEGORY	CHANGE	% CHANGE
TRAINING HOURS	- 451K	- 10%
NET COST	- $15M	- 17%
TOTAL COSTS	- $21M	- 12%

NUMBER OF TRAINING EVENTS REDUCED IN ALMOST ALL CATEGORIES

FY92 COSTS

- COST PER INDIVIDUAL TRAINED:
  - NET $1,182
  - TOTAL . . . . . . $2,461   ABOVE DoD AVERAGE
- COST PER TRAINING HOUR:
  - NET . . . . $ 18
  - TOTAL . . . . . . $ 38   BELOW DoD AVERAGE

AIR FORCE COST

Table 5-3 displays a relatively consistent FY90-92 decline in almost all cost elements. Air Force experienced a greater percentage decline in net and total cost (17 and 12 percent) than in number of training hours (10 percent).

When calculating civilian training benchmarks in Chapter 4, we discovered a sizeable percentage shift in number of Air Force training events by source, as reported to OPM by Air force. Total number of events dropped 18 percent to 117,000. This could be a contributing factor in the 38 percent decline in trainee travel and per diem costs. College and professional association events fell by 38 percent, over twice the cumulative average decrease. Number of Air Force internal events and private events declined by 19 and 13 percent, while the number of events from other federal sources rose 3 percent, to 9,688.

Air Force net and total cost per individual trained are two and 10 percent above the DoD-wide average. The net and total cost per training hour are 14 and seven percent below the DoD-wide average.

TABLE 5-4

ARMY COST

(CONSTANT FY94 $ IN MILLIONS)

COST ELEMENT	FY 90 *	FY 91 *	FY 92 *
AGENCY STAFF SALARY & BENEFITS			
1. INSTRUCTORS	$ 3	$ 6	$ 7
2. EDUCATIONAL DEVELOPMENT SPECIALISTS	26	26	26
3. ADMINISTRATIVE & CLERICAL	11	12	11
EXTERNALLY PURCHASED PRODUCTS & SERVICES	6	3	0
OTHER AGENCY TRAINING COSTS	0	0	0
TRAINEE TRAVEL & PER DIEM	38	62	55
TRAINEE TUITION & OTHER	41	44	83
NET COST	$ 126	$ 153	$ 182
PLUS: TRAINEE SALARY & BENEFITS	205	170	156
TOTAL COST	$ 331	$ 323	$ 338

* MAY NOT ADD DUE TO ROUNDING

FY90-92 COMPARISON

CATEGORY	CHANGE	% CHANGE
TRAINING HOURS	- 2.8M	- 26%
NET COST	+ $56M	+ 44%
TOTAL COST	+ $ 7M	+ 2%
TRAINEE TUITION	+ $42M	+102%

FY92 COST

- COST PER INDIVIDUAL TRAINED:
  - NET $1,302
  - TOTAL . . . . . . $2,418 } ABOVE
- COST PER TRAINING HOUR: DoD
  - NET . . . . $ 23 AVERAGE
  - TOTAL $43

ARMY COST

Table 5-4 shows that Army's net and total cost grew by 44 and two percent, while the number of training hours fell by 26 percent to 7.9 million.

Our efforts to generate civilian training benchmarks in Chapter 4 included a close analysis of training events the services reported to OPM. We found there were significant shifts in Army training hours by source over the FY90-92 timeframe. Number of Army internal hours and other federal hours dropped by 35 percent to 5.1 million, yet there was an 18 percent rise in training hours from private sources. This greater reliance on private training contributes to the $42 million, 102 percent increase in trainee tuition costs.

Army net and total average cost per individual trained are 12 and eight percent above the DoD-wide average. Similarly, Army's net and total cost per training hour are 10 and five percent above the DoD average.

TABLE 5-5

OTHER DoD COST

(CONSTANT FY94 $ IN MILLIONS)

ELEMENT	FY 90 *	FY 91 *	FY 92 *
AGENCY STAFF SALARY & BENEFITS			
1. INSTRUCTORS	$ 15	$ 17	$ 16
2. EDUCATIONAL DEVELOPMENT SPECIALISTS	12	13	13
3. ADMINISTRATIVE & CLERICAL	22	24	26
EXTERNALLY PURCHASED PRODUCTS & SERVICES	14	14	13
OTHER AGENCY TRAINING COSTS	6	1	1
TRAINEE TRAVEL & PER DIEM	28	29	29
TRAINEE TUITION & OTHER	26	30	32
NET COST:	$ 120	$ 127	$ 128
PLUS: TRAINEE SALARY & BENEFITS	117	126	135
TOTAL COST:	$ 237	$ 253	$ 263

* MAY NOT ADD DUE TO ROUNDING

FY90-92 COMPARISON

CATEGORY	CHANGE	% CHANGE
TRAINING HOURS	+ 719K	+ 12%
NET COST	+ $ 8M	+ 7%
TOTAL COST	+ $26M	+ 11%

155% INCREASE IN NUMBER OF LONG TERM TRAINING EVENTS

FY92 COSTS

- COST PER INDIVIDUAL TRAINED:
  - NET $1,302
  - TOTAL . . . . . . $2,418   → MUCH ABOVE DoD AVERAGE
- COST PER TRAINING HOUR:
  - NET . . . . $ 23
  - TOTAL . . . . . . $43   → ABOVE DoD AVERAGE

OTHER DoD COST

Unlike the services, the Other DoD portion of our population grew in size between FY90-92. In Chapter 4, for example, we showed that this DoD component increased from 151,000 to 191,000, a 26 percent jump. Table 5-5 summarizes a 719,000, 12 percent increase in training hours. Other DoD net and total costs grew at smaller, seven and 11 percent rates.

Analyzing the number of training events reported to OPM indicates they increased 41 percent (to 37,000) for private sources. This is a likely cause of the $6 million, 23 percent growth in trainee tuition costs. Within DoD component training events grew 35 percent (to 137,000), while college and professional association events increased by eight percent to 16,000. Training events provided through other federal sources declined to 30,000, an 11 percent drop from FY90.

Other DoD net and total average cost per individual trained are 33 and 42 percent higher than the DoD-wide average. This partially reflects a 155 percent increase in the number of long term training events. The National Guard Bureau accounted for 80 percent of these 451 long term events in FY92. The Other DoD net and total cost per training hour were 10 and five percent above the DoD-wide average.

We previously documented 120 DoD training institutions offering 2,237 different courses in FY92 attended by DoD civilians. As part of the separate analysis of professional development s¹ courses for military and civilian n. ers of DoD, we are describing selected case studies of the operations, workload and resource profiles of five DoD training institutions. In three of these institutions civilians make up the majority of graduates (Army Management Engineering College, Army Defense Ammunition Center & School and Army Engineering and Housing Support Center). Two case studies depict emerging trends in functional training offered by a consortium of schools (Defense Acquisition University and Defense Business Management University).

The major findings from these case studies are:

(1) DoD has begun "fee for service" training and related consulting services at the Army Management Engineering College (AMEC).

(2) AMEC was recently designated a Reinvention Laboratory as a part of the National Performance Review process. AMEC is seeking approval to solicit customers from state and local governments.

(3) The student:faculty ratio increased over three years at smaller training institutions where DoD civilians comprise the majority of all graduates.

(3) The acquisition and comptroller fields are using very divergent management techniques as they transition to standardized functional training offered by a consortium of schools:

• The acquisition community, through the Defense Acquisition University, operates a very centralized training system. DAU controls curriculum, student selection and funding from its $86.8 million O&M budget for FY94.

• The comptroller community, through the Defense Business Management University, uses a decentralized system to control functional training. DBMU has a $3.8 million O&M budget in FY94 and primarily exercises a coordinating role in both curriculum development and training delivery.

ARMY MANAGEMENT ENGINEERING COLLEGE

AMEC was established at Rock Island, IL, in 1952. Its FY94 curriculum contains 86 courses offered in four academic areas. Information systems is the largest, offering 27 courses, or 31 percent of the total. This is followed by resource management (22 courses, or 26 percent of the total), acquisition (21 courses, 24 percent), and leadership and total quality (16 courses, 19 percent). The American Council on Education has approved 43, or half of AMEC's courses, for accreditation. AMEC also sponsors four Defense Acquisition University courses and is pursuing approval to become a certified offeror of five others.

AMEC is actively participating in Vice President Gore's National Performance Review process. AMEC was designated a Defense Performance Review Reinvention Laboratory in December 1993 and is seeking approval to solicit customers from state and local governments.

Staffing. Figure 6-1 shows that AMEC's training infrastructure remained relatively constant between FY90-93, though initiatives are underway to relocate its faculty closer to potential customers throughout the United States. Faculty workyears dropped from 76 to 74, but total AMEC staffing grew three and one-half workyears, or three percent. This was due to the five and one-half workyear increase in administrative and support staff. AMEC has established a growing network of Regional Training Centers within this total workforce.

There are five and three person RTCs operating out of DoD facilities in St. Louis, MO, and Huntsville, AL, while a one person RTC is active in Denver, CO. AMEC proposes to open RTCs in Washington, DC, Monterey, CA, and San Diego, CA. These locations were chosen because of their proximity to sizable DoD target audiences for AMEC sources and consulting services.

Curriculum. The number of different courses offered by AMEC dropped 10 percent, from 122 to 110, while the number of total course offerings rose from 655 to 675, a three percent increase. Note that 26 of the 110 courses AMEC taught in FY93--almost one-fourth of the total--had only civilian graduates.

Student Workload. As shown in Figure 6-2, the number of graduates dropped slightly between FY90-93. There were 14,600 total graduates in FY90. This fell by four percent to 14,000 in FY93. The student graduate:faculty ratio fell from 192.1:1 to 189.2:1, a drop of one and one-half percent.

About 93 percent of all FY90 graduates were DoD civilians. The FY93 graduates consisted of 84 percent DoD civilians, 15 percent military and other, plus one percent non-DoD civilians. The non-DoD civilian percentage of graduates is expected to increase significantly if AMEC gets NPR approval to train state and local government workers.

FIGURE 6-1

ARMY MANAGEMENT ENGINEERING COLLEGE
FY90-93 INFRASTRUCTURE SUMMARY

STAFFING (IN WORK YEARS)

FY90-93 TRENDS
- 3% STAFFING INCREASE
- 10% DROP IN NO. OF DIFFERENT COURSES
- 3% RISE IN TOTAL COURSE OFFERINGS

COURSES

GROWING NETWORK OF REGIONAL TRAINING CENTERS

NOW	PROPOSED
ST LOUIS, MO	WASHINGTON, DC
HUNTSVILLE, AL	MONTEREY, CA
DENVER, CO	SAN DIEGO, CA
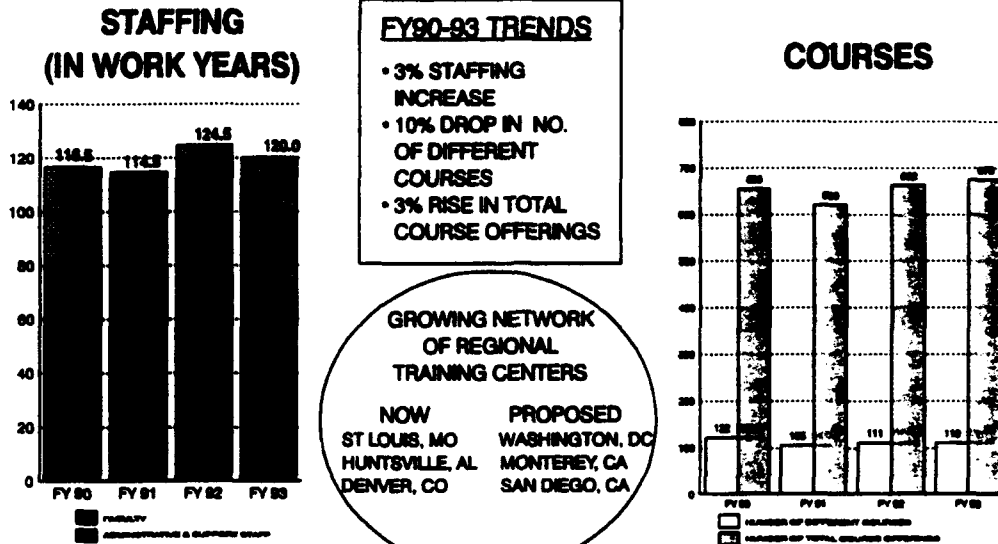
SOURCE: DATA PROVIDED BY AMEC

FIGURE 6-2

ARMY MANAGEMENT ENGINEERING COLLEGE
FY90-93 WORKLOAD SUMMARY

TOTAL GRADUATES

4% REDUCTION IN TOTAL GRADUATES, FY90-93

MILITARY & OTHER (2.2)

NON-DoD CIVILIANS (0.03)

DoD CIVILIANS (11.8)

PERCENTAGE DISTRIBUTION OF FY 93 GRADUATES:
- 84% DoD CIVILIAN
- 15% MILITARY & OTHER
- 1% NON-DoD CIVILIAN

26 OF 110 COURSES (24%) IN FY93 HAD ONLY CIVILIAN GRADUATES
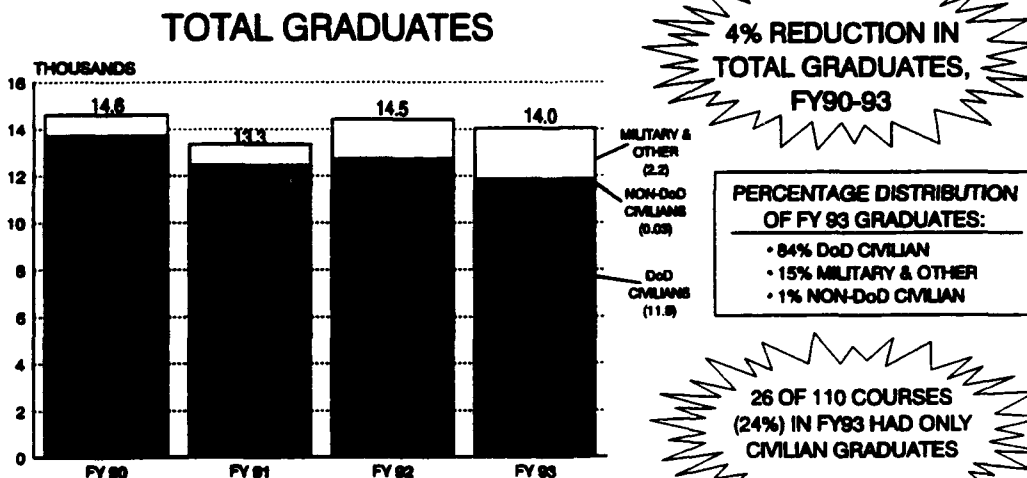
SOURCE: DATA PROVIDED BY AMEC

Resources: Fee for Service Operations. FY94 represents a watershed resourcing year for AMEC. It is the last year AMEC will receive O&M direct funds. Figure 6-3 indicates that $2.3 million, or 24 percent of AMEC's $9.8 million O&M budget for FY94, is direct funded through Army resourcing channels. The $7.5 million balance, or 76 percent of operating budget expenses, must be generated through reimbursable dollars paid by customers. The movement toward reimbursable, fee for service operations dates to FY91, when it accounted for seven percent of budget. That rose to 15 percent in FY92 and 31 percent in FY93. By FY95 AMEC will be operating on a 100 percent reimbursable basis.

Customers now reimbursing AMEC include both students attending AMEC courses and organizations receiving AMEC consulting services.

• AMEC consulting includes on-site advice and assistance to implement total quality leadership and management techniques, facilitating strategic planning sessions and other related services. For example, AMEC has been assisting the DoD Military Enlistment Processing Command (MEPCOM) in redesigning its organization, determining staffing levels and conducting marketing surveys.

• AMEC provides consulting services on a reimbursable, fee for service basis. Customers pay $1,000 a day per consultant, plus their travel and per diem expenses.

On October 1, 1993, AMEC students began paying on a fee for service basis. For example, each student pays AMEC from $300 to $460 for five day courses conducted at Rock Island, IL. Exporting five day AMEC courses using mobile training teams costs the requesting organization from $5,000 to $6,000. It is too early to discern any trends in projected versus actual student enrollment in this fee for service environment, though AMEC has noticed "sticker shock" from some requesting organizations.

FIGURE 6-3

ARMY MANAGEMENT ENGINEERING COLLEGE
FY 94 RESOURCING
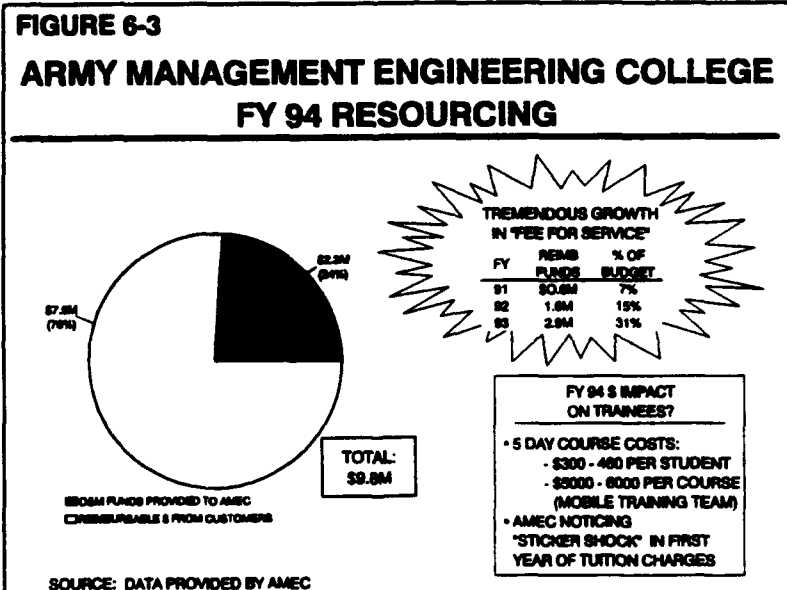
ARMY DEFENSE AMMUNITION CENTER & SCHOOL

This school is located in Savanna, IL, and trains civilians in such courses as Explosive Safety for Firing Ranges, Electrical Explosives Safety and Transportation of Hazardous Material. Figure 6-4 shows that total graduates grew to 4,877 between FY91-93, a 19 percent increase. Civilians comprise 56 percent of the FY93 figure, a drop from 63 percent in FY91. There was no net increase in faculty size over the three fiscal years. While we have shown that the overall size of the DoD civilian workforce has been dropping since FY90, this school's graduate workload grew 19 percent between FY91-93. The student graduate:faculty ratio grew from 77:1 in FY91 to 92:1 in FY93, a 19 percent increase.

FIGURE 6-4
ARMY DEFENSE AMMUNITION CENTER & SCHOOL
SAVANNA, IL

WORKLOAD

GRADUATES

6000
4877
4091 4078
4000
2157
1508 1382
2000
0
  91   92   93
FISCAL YEAR
■ DoD CIVILIANS
□ MILITARY & OTHER

19% GROWTH
IN GRADUATES,
FY 91-93

2720 DoD
CIVILIAN GRADUATES
IN FY93
(56% OF TOTAL)

SOURCE: DMDC TRAINING
OUTPUT DATA FILE

19% INCREASE IN
STUDENT:FACULTY RATIO
• 77:1 IN FY91
• 92:1 IN FY93

FACULTY SIZE

WORKYEARS

60
53   51   53
50
40
30
20
10
0
  91   92   93
FISCAL YEAR

FACULTY SIZE
RELATIVELY
CONSTANT

SOURCE: DATA PROVIDED BY ARMY
DEFENSE AMMUNITION CENTER
AND SCHOOL

ARMY ENGINEERING & HOUSING SUPPORT CENTER

This Fort Belvoir, VA, institution is the third example of schools in which DoD civilians make up the majority of all graduates. Total graduates grew 35 percent between FY91-93 [Figure 6-5]. The 551 civilian graduates in FY93 are 75 percent of the 732 total. This is a minor percentage drop from FY91, when civilians comprised 78 percent of the 543 graduates.

The courses most attended by DoD civilians include Directorate of Engineering and Housing Orientation, Value Engineering, Army Family Housing Management, and Estimating for Construction Modifications. This school is the smallest of those in our case studies. Faculty workyears remained constant at eight between FY91-93. The student graduate:faculty ratio rose 35 percent, from 68:1 to 92:1.

FIGURE 6-5
ARMY ENGINEERING & HOUSING SUPPORT CENTER
FT BELVOIR, VA

WORKLOAD

GRADUATES

35% GROWTH IN GRADUATES, FY 91-93

551 DoD CIVILIAN GRADUATES IN FY93 (75% OF TOTAL)

DoD CIVILIANS
MILITARY & OTHER

SOURCE: DMDC TRAINING OUTPUT DATA FILE

35% GROWTH IN STUDENT:FACULTY RATIO
• 68:1 IN FY91
• 92:1 IN FY93

FACULTY SIZE

WORKYEARS

NO CHANGE IN FACULTY SIZE

SOURCE: DATA PROVIDED BY ARMY ENGINEERING & HOUSING SUPPORT CENTER
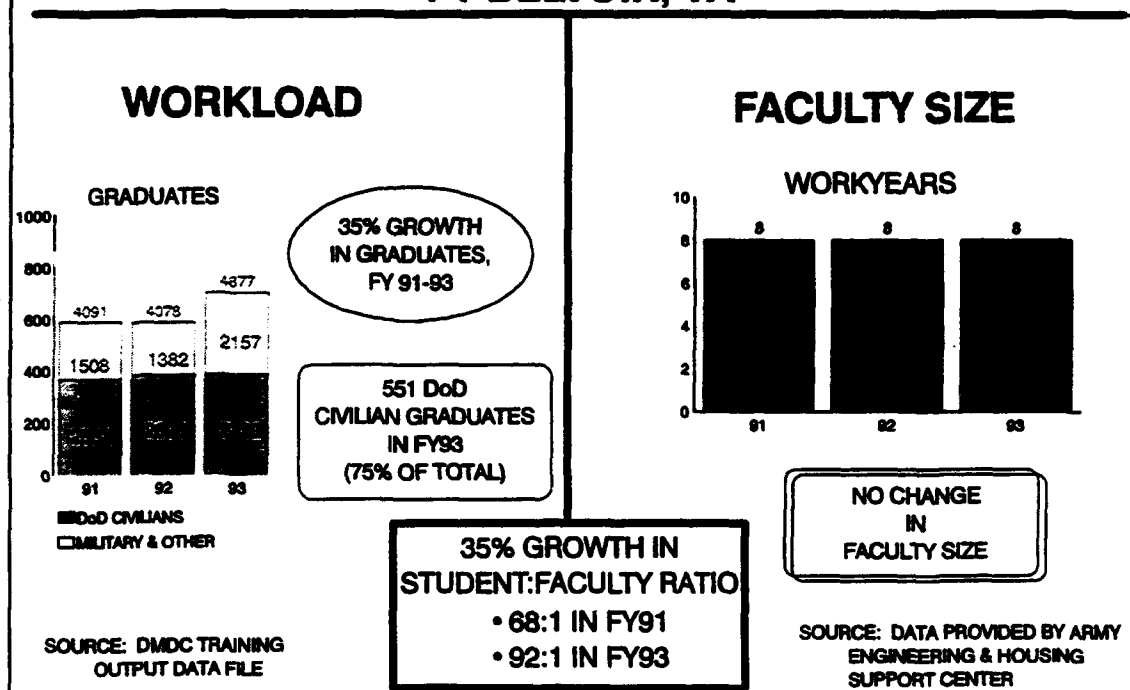
DEFENSE ACQUISITION UNIVERSITY

DAU was established at Alexandria, VA, in August 1992 to manage DoD resources for delivering mandatory acquisition education and training, preparing professionals for effective service in the DoD acquisition workforce. DAU was authorized by the Defense Acquisition Workforce Improvement Act (DAWIA) of 1990 (Chapter 87, Title 10, United States Code). DAWIA directed DoD to professionalize its acquisition workforce by establishing a management and career development structure, including specific education, training and experience requirements.

Acquisition Workforce. There are about 126,000 people in the DoD acquisition workforce, which covers twelve career fields. Almost three-fourths of these 126,000 work in five fields: contracting (about 30,000); systems planning, research & development and engineering (30,000); quality assurance (13,000); acquisition logistics (11,000); and purchasing and procurement (9,000).

DAU is authorized 24 positions and 20 are currently filled. There are eight people in academic affairs, seven in resources management, three in operations and two in the office of the president. The DAU president's position is currently vacant. DAU reports to the Under Secretary of Defense for Acquisition and Technology.

Operational Structure. Eight OSD functional boards have been created to determine what career competencies are needed in their functional areas. Four Directors of Acquisition Career Management (DACM) oversee the acquisition workforce in the three military departments and the DoD components outside the military departments. The DACMs determine which positions are in the acquisition workforce. They send their consolidated training requirements to DAU, which compiles requirements, assigns quotas to DACMs and monitors registration and class fills at consortium schools.

FIGURE 6-6

DEFENSE ACQUISITION UNIVERSITY

OPERATIONAL STRUCTURE

- EIGHT OSD FUNCTIONAL BOARDS, E.G., ACQUIS MGMT, PROCUREMENT & CONTRACTING, ACQUIS LOGISTICS
- EACH SERVICE:
  - HAS DIRECTOR, ACQUISITION CAREER MGMT (DACM)
  - SENDS TRAINING RQMTS TO DAU
  - DAU COMPILES REQMTS, COMPARES WITH CAPACITIES, SCHEDULES COURSES
- 15 SCHOOLS IN DAU CONSORTIUM

DAU CONSORTIUM MEMBERS

- AIR FORCE INSTITUTE OF TECHNOLOGY
- ARMY LOGISTICS MGMT COLLEGE
- ARMY MGMT ENGR COLLEGE
- DEFENSE CONTRACT AUDIT INSTITUTE
- DLA CIV PERSONNEL SERVICE SUPPORT OFFICE
- DEFENSE SYSTEMS MGMT COLLEGE
- INFORMATION RESOURCES MGMT COLLEGE
- INDUSTRIAL COLLEGE OF ARMED FORCES
- LACKLAND TECH TRAINING CENTER
- NAVY ACQUISITION MGMT TRAINING OFFICE
- NAVAL FACILITIES CONTRACTS TRAINING CENTER
- NAVAL POSTGRAD SCHOOL
- NAVAL WARFARE ASSESSMENT DIVISION
- OASN (RD&A)
- EUROPEAN COMMAND CONTRACT TRAINING OFFICE

SOURCE: DATA PROVIDED BY DAU

DAU CONSORTIUM SCHOOLS

Figure 6-6 lists the 15 DoD schools in the DAU consortium. In order of magnitude, the following schools trained the most members of the acquisition corps in FY93: Army Logistics Management College, Defense Systems Management College (DSMC), the Air Force Institute of Technology and the Army Management Engineering College. DSMC and the Navy Acquisition Management Training Office are funded completely through DAU. The remaining DAU consortium schools receive only part of their operating funds through delivery of DAU courses.

FIGURE 6-7

DEFENSE ACQUISITION UNIVERSITY RESOURCE PROFILE

FY94 OPERATING BUDGET

TOTAL: $86.8M

FY95 O&M BUDGET REQUEST: $111M

SOURCE: DATA PROVIDED BY DAU

RESOURCE MANAGEMENT CONCEPTS

- CENTRALIZED RESOURCE ALLOCATION SYSTEM
- BUY ACQUISITION EDUCATION & TRAINING SERVICES FROM CONSORTIUM MEMBERS
- DAU DOLLARS FUND STUDENT & SCHOOL HOUSE EXPENSES

RETURN ON INVESTMENT:		
FISCAL YEAR	NO. OF COURSES	NO. OF GRADUATES
93	49	23K
94	50	34K (est)
95	65 - 70	67K (est)

DAU RESOURCES

The FY94 DAU resource profile is shown on Figure 6-7. DAU was originally resourced by reprogramming dollars from the services and defense agencies. In FY93, these funds were combined in the Army's O&M budget. The funds were transferred to DAU control in FY94 in the O&M, Defensewide, appropriation. The FY94 DAU operating budget is $86.8 million. Under DAU's centralized resource allocation system:

- $54.2 million, or 62 percent, is devoted to course standardization, development and delivery; a prorated share of faculty salaries at schools in the DAU consortium; and overhead.

- DAU funds all trainee expenses, so student travel and per diem account for $29.3 million, or 34 percent.

- The $3.3 million balance covers salaries and other DAU operating costs.

The $86.8 million O&M budget is almost one-third higher than the $66.5 million level in FY93. The President's FY95 budget submission to Congress proposes $111.6 million in direct funds, 29 percent above FY94.

One measure of return on investment is the number of course graduates. There were about 23,000 graduates of 49 different courses offered by consortium schools in FY93. This is expected to rise by 48 percent to about 34,000 graduates in FY94. Consortium schools are redesigning existing courses and developing numerous pilot courses.

DEFENSE BUSINESS MANAGEMENT UNIVERSITY

DBMU was established in December 1992. Like DAU, DBMU can trace its roots to recent legislation. The Chief Financial Officer's Act of 1990 (Public Law 101-576) charges DoD's Chief Financial Officer (the DoD Comptroller) with responsibility to recruit and train its professional workforce across all components. DBMU serves as the coordinating mechanism to forge agreement on the education and training needs of about 85,000 people in DoD's financial management community. DBMU estimates that 72,000 of these (85 percent of the total) are civilians.

DBMU coordinates the development and delivery of required curriculum and courses through a small infrastructure primarily located in Arlington, VA. All 16 of DBMU's authorized positions are filled—four in the office of the president, five in Academic Programs and seven in Curriculum Improvement. All but three people work in Arlington, VA. The DBMU president reports to the DoD Comptroller.

DBMU receives $3.8 million in FY94 O&M, Defensewide funds. This covers only DBMU's operating costs. All students who attend DBMU-approved courses have their travel and per diem expenses funded by their parent organization. DBMU consortium members receive no reimbursement from DBMU. The President's FY95 budget submission requests $3.9 million in O&M funds for DBMU.

DoD-wide oversight is provided by the Senior Advisory Policy Council chaired by the DoD (Comptroller). There are four standing committees under this council representing the areas of business management that execute DBMU's curriculum development mission--comptrollership, analysis, budget and finance & accounting. Each committee is chaired by a service or OSD agency representative and has five to 10 part time members and a full time DBMU subject matter expert and committee facilitator.

FIGURE 6-8

DEFENSE BUSINESS MANAGEMENT UNIVERSITY

OPERATIONAL
STRUCTURE

• DoD-WIDE OVERSIGHT
BY SENIOR ADVISORY
POLICY COUNCIL,
CHAIRED BY DoD (COMPT)

• OVER 20 SCHOOLS IN
DBMU CONSORTIUM

• STANDING COMMITTEES
EXECUTE CURRICULUM
DEVELOPMENT MISSION

SAMPLE OF
DBMU CONSORTIUM SCHOOLS

• AIR FORCE INSTITUTE
OF TECHNOLOGY
• 3700TH TECHNICAL
TRAINING WING
• AIR UNIVERSITY CENTER
FOR PROFESSIONAL
DEVELOPMENT
• ARMY MANAGEMENT
ENGINEERING COLLEGE
• ARMY JUDGE ADVOCATE
GENERAL'S SCHOOL
• ARMY LOGISTICS MGMT
COLLEGE

• DEFENSE RESOURCES
MGMT INSTITUTE
• DEFENSE SYSTEMS
MGMT COLLEGE
• NAVAL POSTGRADUATE
SCHOOL
• NAVAL TECHNICAL
TRAINING CENTER
• USAF EXTENSION
COURSE INSTITUTE
• USMC FINANCIAL
MGMT SCHOOL
COMPANY

SOURCE: DATA PROVIDED BY DBMU

DBMU CONSORTIUM TRAINING

Over 20 DoD training institutions are members of the DBMU consortium. Those providing the greatest volume of training to DoD's financial management community are shown in Figure 6-8. Note that five of these are also in the DAU consortium--Air Force Institute of Technology, Army Management Engineering College, Defense Systems Management College, Army Logistics Management College and Naval Postgraduate School.

FIGURE 6-9

DEFENSE BUSINESS MANAGEMENT UNIVERSITY
COURSE REVIEWS

FUNCTIONAL AREA	COURSES REVIEWED	RECOMMENDED FOR:		CORE (DoD) COURSES BEING DEVELOPED
		RETENTION/ MODIFICATION	POTENTIAL ELIMINATION	
COMPTROLLERSHIP	15	5	10	3
FINANCE & ACCOUNTING	76	27	49	11
BUDGET	7	6	1	1
ANALYSIS (INCLUDING ACQUISITION-RELATED)	69	TBD	TBD	14

CORE COURSES WILL HAVE DoD STANDARD
• SYSTEMS
• POLICIES
• PROCEDURES

FINAL OUTPUT WILL BE CURRICULA MASTER PLAN

WILL RESULT IN REDUCED COURSE DEVELOPMENT COSTS

SOURCE: DATA PROVIDED BY DBMU

DBMU COURSE REVIEWS

Figure 6-9 shows the course review progress being made by DBMU's standing committees. In determining what needs to be taught, these committees are reviewing over 160 DoD-wide courses. They have tentatively recommended 38 for retention or modification, 60 for potential elimination and have identified another 29 core DoD courses for development. In the latter category, for example, the comptrollership standing committee recommends a two week basic comptrollership

course, a four to five week intermediate course and a ten day e..ecutive course.

These course reviews will result in a core curricula master plan that will be submitted to the DoD Comptroller for approval. All courses in the master plan will contain high quality, standardized business management courses within DoD. The fewer number of DoD-wide financial management courses is expected to lower course development costs by an undetermined amount.

We conducted In-Progress Reviews for 14 DoD components in January and February 1994, asking them to review and comment on our study methodology, data compilation techniques and draft findings. These components were also invited to respond to the following three questions related to the overall assessment of resources allocated to DoD civilian training:

1. Can you define and quantify any indirect civilian training costs not already included in this report?

2. Can you describe a proposed methodology to link civilian training costs to specific DoD appropriations?

3. Can you identify any areas of potential resource savings related to civilian training?

Seven of the 14 DoD components responded to some or all of these questions. A summary of their comments follows.

DEFINING AND QUANTIFYING INDIRECT TRAINING COSTS

Four components addressed this question, generally stating they already report their indirect costs to OPM and that existing DoD data bases do not allow them to capture additional indirect costs.

Army says it already reports indirect training costs to OPM. These annual submissions include such cost elements as workyears of support provided by Educational Development Specialists or related positions, workyears of civilian training administrative and support personnel, plus costs tied to civilian training needs assessments and evaluations. Army says further indirect cost information is not available,

especially since its SBT (Sustaining Base Training) schools that train civilians also train military personnel.

Air Force responds that it already reports both direct and indirect costs to OPM, adding that neither its personnel nor finance and accounting data bases can capture "other" costs, such as resources needed to develop and maintain programs of instruction and lessons plans. Similarly, Navy says it is not feasible to identify or evaluate indirect expenditures beyond those already reported to OPM. Defense Logistics Agency comments that indirect training costs are not available.

LINKING CIVILIAN TRAINING COSTS TO DoD APPROPRIATIONS

Six respondents commented on this question, raising three major concerns. First, they say it is difficult to perform such a linkage because DoD lacks a standard cost accounting system. Second, they feel that linkage alone will not bring about cost reductions or other economies and efficiencies. Third, DoD (Comptroller) says linkage efforts should include expanding the scope of this study from formal schools and infrastructure to a review of the major commands and installation-level management of civilian training.

Army says it knows of no way to capture civilian training costs by appropriation, citing a June 1992 joint Army-contractor study documenting the lack of a standard cost accounting system within DoD.

Navy states that linking training costs to appropriations will not bring about the necessary cost reductions. Navy argues the Operation & Maintenance funds used by local commanders provide needed discretion to manage civilian training requirements. Higher headquarters should not mandate spending earmarked training funds if the training is not needed. Navy then recommends that DoD efforts to control or reduce training costs should focus on identifying essential training and assisting managers in avoiding nonessential training.

Air Force says it already fences civilian training funds in Major Force Program 8, Program Element Code 88751. This enables Air Force to identify available funds in the current year and outyears, in light of funded and unfunded requirements. Air Force adds that fencing funds in this manner makes them visible and vulnerable to potential budget reductions. Finally, Air Force feels that OSD should consider improving the process used to determine and forecast civilian training dollars, linking these costs to life cycle appropriations.

Defense Logistics Agency states that linkage alone will not gain civilian training economies and efficiencies. Instead, DLA feels DoD should conduct a requirements-based needs assessment that would include linking training resources to strategic initiatives and missions of services and defense agencies.

Defense Commissary Agency wants to link civilian training to the overall maintenance of the agency, with specific funds fenced for civilian training only.

AREAS OF POTENTIAL RESOURCE SAVINGS

All seven respondents addressed this question. In general, they recommend conducting requirements-based training assessments, while also exploring better uses of technology, especially distance learning techniques. The Office of the Under Secretary of Defense (Acquisition and Technology) describes this as using technology as an instructional multiplier.

Army's Sustainment Base Training management process uses functional standing committees to certify requirements. Army believes this process could be applied DoD-wide to establish a requirements-based civilian training system. Army also endorses fee for service initiatives as a means to create a more competitive business environment for civilian training.

Navy says that current budget drawdowns require managers to end nonessential training. Navy recommends focusing on two areas. First, assess civilian training requirements by identifying core requirements. Second, expand the use of technology to develop and deliver training to large groups at a reduced cost per employee.

Air Force states that any resourcing decisions should be based on a training requirements model addressing the complexity of civilian training programs. Air Force notes it has developed financial planning and Program Objective Memorandum (POM)

front end analysis models to identify civilian training needs based on mission requirements. Air Force also wants to increase the use of DoD technical training centers [TTC] and new training technology. Air Force says it trained over 6,700 people at TTC in FY93 and is making significant investments in distance learning technology. Air Force believes it would be economical and efficient if one service or OSD agency was named DoD executive agent for technology-based education.

Defense Logistics Agency also recommends exploring better uses of technology, such as satellite links and computer-based training. DLA would like to see civilian training budgeted for as an investment rather than overhead.

Defense Commissary Agency would like to examine three potential areas for resource savings: reducing the number of trainee programs, instituting more train-the-trainer programs, and emphasizing more home study programs as a means to reduce travel and per diem expenses.

Finally, DoD (Comptroller) recommends using benchmarking techniques to capture the best civilian training practices used throughout the department. DoD (Compt) also wants to assure that DoD is providing "just in time" training for its civilian workforce. This would include a DoD-wide management review of the civilian training needs assessment process.

We have shown that based on DoD component input to OPM, FY92 civilian training cost the Department $551 million in net cost [excluding civilian salary while in training] and $1,064 million in total cost. Net and total costs fell by 15 and 13 percent between FY90-92, during which time the size of the DoD civilian workforce dropped by four percent. The net and total costs per individual trained were $1,161 and $2,242, respectively. Of 972,000 DoD civilians, almost half (475,000) attended 983,000 training events at least eight hours long. The DoD portion of this training was conducted through 2,237 courses offered by 120 different training institutions.

We developed two benchmarks for civilian training tempo -- percent of workforce trained and average hours of training received per trainee. We found that as the size of the workforce dropped four percent between FY90-92, the training tempo remained relatively constant:

- the percent of workforce trained dropped slightly, from 50 to 49 percent

- average hours of training received per trainee was 55 in FY92, compared with 59 hours in FY90. The FY92 figure is eight percent above the 51 annual training hours received by the total federal workforce.

We learned through case studies of schools conducting professional development short courses that:

- fee for service training is underway at Army Management Engineering College. AMEC has also been designated a Defense Performance Review Reinvention Laboratory.

- DoD's acquisition and comptroller communities are transitioning to standardized training offered by a consortium of schools.

We then asked 14 participating DoD components to address questions for which we had no empirical evidence upon which to base conclusions or recommendations. These dealt with quantifying additional indirect costs, listing methodologies to link civilian training costs to specific DoD appropriations and identifying areas of potential resource savings. Seven DoD components responded, stating that:

- they already report indirect training costs to OPM, and existing DoD data bases do not allow them to capture any additional indirect costs

- it is difficult to link costs to DoD appropriations because DoD lacks a standard cost accounting system

- potential resource savings may be achieved by conducting requirements-based training assessments and exploring better uses of technology, especially distance learning techniques.

The timing of our report coincides with a greater focus given to all civilian federal workforce training, as

shown in Vice President Gore's September 1993 National Performance Review:

• The NPR report states that federal workforce training too often is *ad hoc* and seldom linked to strategic or human resource planning.

• NPR seeks action to eliminate narrow restrictions on employee training to help develop a multi-skilled force. NPR says the current federal government definition of training is obsolete, citing the 1958 Government Employees Training Act, which defined training as a tool for increasing economy and efficiency in government.

• NPR then presents recommendation HRM06: clearly define the objective of training as the improvement of individual and organizational performance: make training more market-driven.

General Accounting Office evaluated the NPR report and issued a December 1993 assessment to Congress (GAO Report No. GAO/OCG-94-1). GAO commented on all NPR recommendations, saying HRM06 is rather vague as to exactly what changes are being called for, but agreeing that more emphasis on federal employee training is needed.

As a result of all empirical evidence gathered and evaluated, we observe there are five major areas worth watching:

• consortium-based training, such as that conducted in the acquisition and financial management communities

under the aegis of Defense Acquisition University and Defense Business Management University

• the evolution of fee for service training, such as that instituted in FY94 by the Army Management Engineering College (AMEC)

• new DoD training initiatives that result from AMEC being designated a Defense Performance Review Reinvention Laboratory in December 1993.

• trends in technology-based instruction, such as distance learning techniques. It would be beneficial from a resource tradeoff perspective to compare cost per student trained using these technologies with those of traditional means of instruction.

• overall cost-benefit improvements resulting from requirements-based training needs assessments.

We will work with the Office of Secretary of Defense, Personnel and Readiness community and the Defense Manpower Data Center to build and maintain a civilian training data base. This will benefit DoD in two ways. First, it fills an information gap, since our research disclosed there is currently no central source of such information. Second, it generates more valid and reliable civilian training data. We discovered DoD components reported incomplete or inaccurate civilian training data to OPM.

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ACRONYM LIST

ADP . . . . Automated Data Processing
AFB . . . . Air Force Base
AFMIC . . . . Armed Forces Medical Intelligence Center
AMEC . . . . Army Management Engineering College
APG . . . . Aberdeen Proving Grounds, Maryland
ASW . . . . Anti-Submarine Warfare
CONUS . . . . Continental United States
DACM . . . . Director for Acquisition Career Management
DAU . . . . Defense Acquisition University
DAWIA . . . . Defense Acquisition Workforce Improvement Act
DBMU . . . . Defense Business Management University
DeCA . . . . Defense Commissary Agency
DEOMI . . . . Defense Equal Opportunity Management Institute
DFAS . . . . Defense Finance & Accounting Service
DIS . . . . Defense Information School
DISA . . . . Defense Information Systems Agency
DITRA . . . . Defense Institute for Training Resources Analysis
DLA . . . . Defense Logistics Agency
DMA . . . . Defense Mapping School
DMDC . . . . Defense Manpower Data Center
DoD . . . . Department of Defense
DoD(Compt) . . . . . Comptroller, Department of Defense
DPI . . . . Defense Polygraph Institute
DRMI . . . . Defense Resources Management Institute
DSMC . . . . Defense Systems Management College
DVIS . . . . Defense Visual Information School
FY . . . . Fiscal Year
INSTN . . . . Institution
IRMC . . . . Information Resource Management College
MGMT . . . . Management
MGR . . . . Manager
NDU . . . . National Defense University
NPR . . . . National Performance Review
NPS . . . . Naval Postgraduate School
NSA/CSS . . . . National Security Agency/Central Security Service

OASN(RD&A)	Office of the Assistant Secretary of Navy, Research, Development and Acquisition
OCONUS	Outside the Continental United States
O&M	Operation and Maintenance
OPM	Office of Personnel Management
OSD	Office of the Secretary of Defense
POM	Program Objective Memorandum
RTC	Regional Training Center
SES	Senior Executive Service
SUPV	Supervisor
TTC	Technical Training Center
USAF	U.S. Air Force
USMC	U.S. Marine Corps
USUHS	Uniformed Services University of the Health Sciences

APPENDIX A

PROJECT PARTICIPANTS

DoD

Deputy Assistant Secretary of Defense, Requirements and Resources
Office of the Assistant Secretary of Defense, Personnel & Readiness, Civilian Personnel
       Policy/Equal Opportunity, Staffing and Career Development
Under Secretary of Defense for Readiness (Readiness & Training)
Office of the Under Secretary of Defense (Acquisition & Technology), Acquisition Education,
       Training and Career Development
Office of the Secretary of Defense, Program Analysis & Evaluation
Office of the Comptroller of the Department of Defense
Defense Manpower Data Center
Office of the DoD Coordinator for Drug Enforcement Policy and Support
Headquarters, U.S. Air Force
Headquarters, U.S. Army
Headquarters, U.S. Navy
Defense Information School
Defense Information Systems Agency
Defense Visual Information School
Information Resource Management College
National Defense University
Defense Commissary Agency
Defense Mapping Agency
Defense Acquisition University
Defense Business Management University
Defense Resources Management Institute
Defense Intelligence Agency
Department of Defense Inspector General
Washington Headquarters Service
Defense Contract Audit Agency
Defense Logistics Agency
Defense Resources Management Institute
Armed Forces Medical Intelligence Center
Defense Equal Opportunity Management Institute
Defense Finance & Accounting Service
Defense Polygraph Institute
Defense Systems Management College
Department of Defense Dependents Schools
Uniformed Services University of the Health Sciences
U.S. Army Management Engineering College
U.S. Army Defense Ammunition Center & School
U.S. Army Engineering & Housing Support Center

OTHER FEDERAL

Office of Personnel Management, Human Resources Development Group

APPENDIX B

DoD COMPONENTS REPORTING TO OPM

Following is a listing of DoD components that submitted some or all of their FY90-92 annual civilian training workload and cost statistics to OPM, using OPM Form 1186 (Personnel Engaged in Agency Training Activities) and OPM Form 1524 (Annual Statistical Summary of Training Data). Copies of these FY90-92 DoD component submissions were provided by Mr. Tony Ryan of the OPM Human Resources Development Group, 901 N. Stuart Street, Suite 1319, Washington DC 20415-0001.

DoD COMPONENT	SUBMISSIONS TO OPM FOR:		
	FY90	FY91	FY92
USAF	X	X	X
Army	X	X	X
Navy [incl. USMC]	X	X	X
Defense Contract Audit Agency	X	X	X
Defense Information Systems Agency	X	X	X
Defense Logistics Agency	X	X	X
Defense Mapping Agency	X	X	X
DoD Inspector General	X	X	X
National Guard Bureau	X	X	X
National Security Agency/Central Security Service (NOTE 1)	X	X	X
Civilian Health & Medical Program of Uniformed Services	X		
Defense Finance & Accounting Service (NOTE 2)		X	X
Defense Investigative Service	X	X	
Defense Nuclear Agency	X		
Uniformed Services University of the Health Sciences (NOTE 3)		X	X

NOTES:

(1) NSA/CSS reports all OPM-requested training statistics except total number of employees assigned to these various DoD intelligence activities.

(2) DFAS reports began in FY91, its first year of existence. Prior to that, these finance & accounting workers were employed by and their training reported by services and other DoD components.

(3) USUHS and several other smaller DoD components did not submit training reports to OPM for all three fiscal years. The lack of complete FY90-92 training workload and cost data for these smaller DoD components is not considered statistically significant, based on strength figures presented in Chapter 4, Frequency:

- the Army, Navy [including Marine Corps] and Air Force account for 780,623 people, or 80 percent of the 971,659 direct hire, CONUS and OCONUS civilian workers in a paid, active status as of September 30, 1992.

- this leaves 191,036 people in the 20 percent, "Other DoD" category. OPM has complete FY90-92 training statistics on seven of these DoD components whose strength comprises 78 percent of the Other DoD group -- Defense Logistics Agency (64,766), National Guard Bureau (53,698), Defense Finance & Accounting Service (10,672), Defense Mapping Agency (7924), Defense Contract Audit Agency (5876), DoD Inspector General (1505) and Defense Information Systems Agency (4720).

- this means we have complete FY90-92 training data available on DoD components that employed 929,784 civilian workers, or 96 percent of the FY92 civilian strength total.

APPENDIX C

FY93 DoD TRAINING SOURCES ATTENDED BY DoD CIVILIANS

# INSTN	LOCATION	INSTITUTION	TERM SHORT	TERM LONG
ARMY INSTITUTIONS:				
1	Aberdeen Proving Grounds, MD	Army Ordnance Center & School	4	
2	Aberdeen Proving Grounds, MD	Army Environmental Hygiene Agency	33	
3	Aberdeen Proving Grounds, MD	School of Military Packaging Technology	11	
4	Alexandria, VA	Community & Family Support Trng Center	22	
5	Fort Belvoir, VA	Engr & Housing Support Center	11	
6	Fort Belvoir, VA	Army Engineer School	1	
7	Fort Ben Harrison, IN	Adjutant General School	1	
8	Fort Ben Harrison, IN	Finance School	15	
9	Fort Ben Harrison, IN	Recruiting & Retention School	2	
10	Fort Bliss, TX	Air Defense Artillery	2	1
11	Fort Devens, MA	Army Intelligence School	4	
12	Fort Eustis, VA	Aviation Logistics School	10	
13	Fort Eustis, VA	Army Transportation Center & School	13	
14	Fort Gordon, GA	Army Signal Center & School	32	6
15	Fort Huachuca, AZ	Intelligence Center & School	7	
16	Fort Knox, KY	Army Armor School	1	
17	Fort Leavenworth, KS	Center for Army Leadership	4	
18	Fort Leavenworth, KS	Command & General Staff College	8	
19	Fort Lee (Charlottesville, VA)	Judge Advocate General School	18	
20	Fort Lee , VA	Logistics Management College	79	
21	Fort Lee , VA	Army Quartermaster School	8	
22	Fort McClellan, AL	Military Police School	10	
23	Fort McClellan, AL	Army Chemical School	6	
24	Fort Monroe, VA	Staff Training Center	1	
25	Fort Rucker, AL	Aviation Center & School	15	
26	Fort Sill, OK	Army Field Artillery School	1	
27	Huntsville, AL	USA Engineer Division, Huntsville	176	
28	Lancaster, PA	Army Center for Civilian Human Res Mgmt	33	
29	Redstone Arsenal, AL	Ordnance Missile &Munitions Ctr & Sch	7	3
30	Rock Island Arsenal, IL	Army Defense Ammo Center & School	64	
31	Rock Island Arsenal, IL	Army Management Engineering College	114	
	TOTAL ARMY		**713**	**10**
NAVY INSTITUTIONS:				
1	Athens, GA	Navy Supply Corps School	7	
2	Bangor, WA	Trident Training Facility	64	
3	Camp Pendleton, CA	Naval Air Maint Training Group	3	
4	Charleston, SC	Fleet & Mine Warfare	13	
5	Charleston, SC	Submarine Training Facility	7	
6	Cherry Point, NC	Naval Air Maint Training Group	11	
7	Coronado, CA	Naval Amphibious School	10	
8	Corry Station, FL	Naval Technical Training Center	14	
9	Dam Neck, VA	Fleet Combat Training Center	18	
10	Dam Neck, VA	Naval Guided Missiles School	6	2
11	Dam Neck, VA	Navy & USMC Intelligence Trng Center	15	
12	Elgin AFB, FL	Naval Sch of Explosive Ordnance Disposal	1	
13	El Toro, CA	Naval Air Maint Training Group	2	
14	Great Lakes, IL	Service School Command	12	
15	Groton, CT	Naval Submarine School	16	
16	Gulfport, MS	Naval Construction Training Center	2	
17	Indian Head, MD	Naval Explosive Ordnance School	2	
18	Jacksonville, FL	Naval Air Maint Training Group	12	

FY93 DoD TRAINING SOURCES ATTENDED BY DoD CIVILIANS

# INSTN	LOCATION	INSTITUTION	TERM SHORT	LONG
19	Kings Bay, GA	Trident Training Facility	15	
20	Kingsville, TX	Naval Air Maint Training Group	2	
21	Lakehurst, NJ	Naval Air Technical Training Center	3	
22	Lemoore, CA	Naval Air Maint Training Group	8	
23	Little Creek, VA	Naval Amphibious School	19	
24	Mare Island, CA	Combat Systems Tech Schools Cmd	8	1
25	Mayport, FL	Fleet Training Center	3	
26	Mayport, FL	Naval Air Maint Training Group	3	
27	Memphis, TN	Chief of Naval Technical Training	1	
28	Memphis, TN	Naval Air Technical Training Center	9	
29	Meridian, MS	Naval Technical Training Center	1	
30	Miramar, CA	Naval Air Maint Training Group	17	
31	Moffet Field, Ca	Naval Air Maint Training Group	2	
32	Monterey, CA	Naval Postgraduate School	0	1
33	New River, NC	Naval Air Maint Training Group	3	
34	Newport, RI	Naval Education & Training Center	4	
35	Newport, RI	Naval Justice School	4	
36	Newport, RI	Naval War College	0	2
37	Newport, RI	Ship Material Readiness (Center)	1	
38	Newport, RI	Surface Warfare Officers School Cmd	1	
39	Norfolk, VA	Fleet ASW Training Center, Atlantic	2	
40	Norfolk, VA	Fleet Training Center	46	
41	Norfolk, VA	Naval Air Maint Training Group	8	
42	Norfolk, VA	Naval Safety School	26	
43	Norfolk, VA	Submarine Training Facility	12	
44	North Island, CA	Naval Air Maint Training Center	18	
45	Oakland, CA	Naval Transportation Mgmt School	11	
46	Oceana, VA	Naval Air Maint Training Group	13	
47	Orlando, FL	Service School Command	1	
48	Panama City, FL	Naval Diving & Salvage Trng Center	4	
49	Pearl Harbor, HI	Naval Submarine Training Center	16	
50	Pensacola, FL	Naval Aviation Schools	7	
51	Philadelphia, PA	Naval Damage Control Trng Center	1	
52	Port Hueneme, CA	Civil Engr Corps Officers School	16	
53	Port Hueneme, CA	Naval Construction Training Center	9	
54	San Diego, CA	Advanced Electronics School	16	
55	San Diego, CA	Fleet ASW Training Center	9	
56	San Diego, CA	Fleet Combat Training Center	7	
57	San Diego, CA	Fleet Intelligence Trng Center, Pacific	2	
58	San Diego, CA	Fleet Training Center	35	
59	San Diego, CA	Service School Command	13	
60	San Diego, CA	Submarine Training Facility	4	
61	San Francisco, CA	Naval Technical Training Center	13	
62	Tustin, CA	Naval Air Maint Training Group	3	
63	Whidbey Island, WA	Naval Air Maint Training Group	5	
64	Quantico, VA	Command & Staff College	0	1
65	Quantico, VA	Computer Science School	14	
66	Quantico, VA	Scout Sniper Instructor	1	
	TOTAL NAVY		631	7
AIR FORCE INSTITUTIONS:				
1	Chanute AFB, IL	3330th Technical Training Wing	38	
2	Goodfellow AFB, TX	3480th Technical Training Wing	19	1
3	Keesler AFB, MS	3300th Technical Training Wing	121	
4	Lackland AFB, TX	3250th Technical Training Wing	60	
5	Lowry AFB, CO	3400th Technical Training Group	75	

FY93 DoD TRAINING SOURCES ATTENDED BY DoD CIVILIANS

# INSTN	LOCATION	INSTITUTION	TERM SHORT	TERM LONG
6	Maxwell AFB, AL	Air Command & Staff College	0	1
7	Maxwell AFB, AL	Air Force Quality Center	2	
8	Maxwell AFB, AL	Air War College	1	
9	Maxwell AFB, AL	Center for Professional Development	26	
10	Maxwell AFB, AL	Ctr of Aerospace Doc, Research & Ed	3	
11	Maxwell AFB, AL	Squadron Officer School	1	
12	Sheppard AFB, TX	3700th Tactical Training Wing	158	
13	Wright-Patterson AFB, OH	Graduate Education	118	5
	TOTAL AIR FORCE		**622**	**7**
OTHER INSTITUTIONS:				
1	Fort Detrick, MD	Armed Forces Medical Intelligence Ctr	1	
2	Fort Lee, VA	Defense Commissary Agency	2	
3	Patrick AFB, FL	Defense Equal Opportunity Mgmt Institute	2	
4	Fort Ben Harrison, IN	Defense Information School	10	
5	Arlington, VA	Defense Information Systems Agency	29	
6	Fort Belvoir, VA	Defense Mapping School	9	
7	Fort McClellan, AL	Defense Polygraph Institute	12	
8	NPS, Monterey, CA	Defense Resources Mgmt Institute	1	
9	Richmond, VA	Defense Security Institute	12	
10	Fort Belvoir, VA	Defense Systems Mgmt College	24	
11	Lowry AFB, CO	Defense Visual Information School	3	
12	Fort McNair, DC	Information Resources Mgmt College - NDU	14	
	TOTAL OTHER		**119**	
122	**TOTAL DoD**		**2085**	**24**
SOURCE FOR OTHER: Input from each institution.				

APPENDIX D

DoD LONG TERM TRAINING ATTENDED BY DoD CIVILIANS

COUNT	LOCATION	INSTITUTION	COURSE TITLE	COURSE LENGTH*
ARMY:				
1	FORT BLISS, TX	AIR DEFENSE ARTILLERY	PATRIOT SYSTEM TECHNICIAN WARRANT OFFICER BASIC	140
2	FORT GORDON, GA	ARMY SIGNAL CENTER & SCHOOL	RADIO REPAIRER	138
3	FORT GORDON, GA	ARMY SIGNAL CENTER & SCHOOL	MICROWAVE SYSTEMS OPERATOR/REPAIRER	159
4	FORT GORDON, GA	ARMY SIGNAL CENTER & SCHOOL	AVIONIC RADAR REPAIRER	133
5	FORT GORDON, GA	ARMY SIGNAL CENTER & SCHOOL	TELECOMMUNICATIONS TERMINAL DEVICE REPAIRER	128
6	FORT GORDON, GA	ARMY SIGNAL CENTER & SCHOOL	SPECIAL ELECTRONIC DEVICES REPAIRER	137
7	FORT GORDON, GA	ARMY SIGNAL CENTER & SCHOOL	TRANSPORTABLE AUTOMATIC SWITCHING SYSTEMS OPERATOR/MAINTAINER	132
8	REDSTONE ARSENAL, AL	ORDNANCE MISSILE & MUNITIONS	HAWK FIELD MAINTENANCE EQUIPMENT/PULSE ACQUISITION RADAR REPAIRER	155
9	REDSTONE ARSENAL, AL	ORDNANCE MISSILE & MUNITIONS	HAWK FIRE CONTROL/CONTINUOUS WAVE RADAR REPAIRER	225
10	REDSTONE ARSENAL, AL	ORDNANCE MISSILE & MUNITIONS	AVENGER SYSTEM REPAIRER	125
NAVY/MARINE CORPS:				
1	DAM NECK, VA	NAVAL GUIDED MISSILES SCHOOL	NATO SEASPARROW MISSILE MAINTENANCE	208
2	DAM NECK, VA	NAVAL GUIDED MISSILES SCHOOL	RADAR (AN/SPS-48E) OPERATION AND MAINTENANCE	187
3	MARE ISLAND, CA	COMBAT SYSTEMS TECH SCHOOLS CMD	FRIGATE CLASS (FFG-7/3661) SHIPS COMPUTER/PERIPHERAL SUBSYSTEM MAINT	244
4	MONTEREY,CA	NAVAL POSTGRADUATE SCHOOL	GRADUATE EDUCATION PROGRAM	265
5	NEWPORT, RI	NAVAL WAR COLLEGE	INTERMEDIATE SERVICE SCHOOL	251
6	NEWPORT, RI	NAVAL WAR COLLEGE	SENIOR SERVICE SCHOOL	251
7	QUANTICO, VA	COMMAND & STAFF COLLEGE	MARINE CORPS COMMAND AND STAFF COLLEGE	282
AIR FORCE:				
1	GOODFELLOW AFB, TX	3480TH TECH TRNG WING	POSTGRADUATE INTELLIGENCE PROGRAM (PGIP)	190
2	MAXWELL AFB, AL	AIR COMMAND/STAFF COLLEGE	AIR COMMAND AND STAFF	304
3	WRIGHT-PATTERSON AFB, OH	GRADUATE EDUCATION	ENVIRONMENTAL MANAGEMENT PROGRAM	487
4	WRIGHT-PATTERSON AFB, OH	GRADUATE EDUCATION	MATHEMATICS PROGRAM	487
5	WRIGHT-PATTERSON AFB, OH	GRADUATE EDUCATION	INFORMATION RESOURCES PROGRAM	487
6	WRIGHT-PATTERSON AFB, OH	GRADUATE EDUCATION	MASTERS OF SCIENCE - ENGINEERING	592
7	WRIGHT-PATTERSON AFB, OH	GRADUATE EDUCATION	PROFESSIONAL SPECIALIZED EDUCATION - EDUCATION WITH INDUSTRY	298

*NOTE: The Army does not include weekends and holidays in course length. The Navy and Air Force do. Therefore, Army long-term training is 125 days or more. Navy and Air Force long-term training is 183 days or more.

SOURCE: DMDC Training Output Data File

APPENDIX E

COST ESTIMATING TECHNIQUES

- **TRAINEE SALARY AND BENEFITS.** These were calculated as follows:

(1) Extract the number of annual short- and long-term training hours for FY90-92 that DoD components reported to OPM on OPM Form 1524 (Annual Statistical Summary of Training Data). The DoD totals amount to 29,744,743 hours in FY90, 24,298,598 hours in FY91 and 25,942,267 hours in FY92.

(2) Obtain the weighted average DoD base pay for the FY90-92 General Schedule/Wage Grade workforce from data provided by the Defense Manpower Data Center's Defense Central Personnel Data File. This file is based on monthly service and agency data submissions in accordance with DoD Instruction 1444.2. The weighted average is $28,976 for FY90, $30,764 for FY91 and $32,291 for FY92.

(3) Based on guidance from DoD(Comptroller), add 22 percent to base pay to reflect benefits costs to DoD. Resulting totals are $35,351 for FY90, $37,532 for FY91 and $39,395 for FY92.

(4) Annualize the salary [base pay and benefits] for each year to constant FY94 dollars by applying DoD deflators for civilian pay. These are contained in the National Defense Budget Estimates for FY94, published by DoD(Comptroller) in May 1993. Annualizing involves dividing the FY90 salary by 0.8811, the FY91 salary by 0.9161 and the FY92 figure by 0.9543. The resultant annualized salary costs are $40,121 for FY90, $40,969 for FY91 and $41,282 for FY92.

(5) Divide annualized salary costs by 2087 hours to yield the cost per hour. The 2087 total is derived from OPM instructions for completing OPM Form 1186 (Personnel Engaged in Agency Training Activities). The resultant cost per hour figures are $19.22 for FY90, $19.63 for FY91 and $19.78 for FY92.

(6) Multiply the trainee salary cost per hour in (5), above, by the number of long- and short-term training hours in (1), above, resulting in total trainee salary and benefits while attending training: $571.694 million in FY90, $476.981 million in FY91 and $513.138 million in FY92.

- **AGENCY STAFF SALARY & BENEFITS.** This involves a three step process:

(1) Extract total agency salary costs from DoD component submissions to OPM on OPM Form 1186 (Personnel Engaged in Agency Training Activities). OPM instructions are to include the salary cost of agency personnel who are civilian personnel instructors, who provide administrative & clerical support, and are in the GS 235 [Educational Development Specialist] or equivalent job series. These dollar totals include base pay only, since OPM instructions direct submitting agencies not to include benefits when computing salary costs. The DoD-wide base salary costs are $135.984 million in FY90, $218.092 million in FY91 and $142.867 in FY92.

(2) Add 22 percent to base salary to include benefits cost to DoD, based on DoD(Comptroller) instructions mentioned in "Trainee Salary and Benefits", paragraph (3), above. The resulting totals are $165.9 million in FY90, $266.072 in FY91 and $174.298 in FY92.

(3) Annualize these totals to FY94 dollars by applying the DoD civilian pay deflators listed in "Trainee Salary and Benefits", paragraph (4), above. Total annualized agency staff salary & benefits cost: $188.288 million in FY90, $290.439 in FY91 and $182.645 in FY92.

- **ALL OTHER COSTS.** These cost categories are reported to OPM on OPM Form 1524 (Annual Statistical Summary of Training Data) and include trainee travel and per diem, trainee tuition and other, external purchases and other agency costs. These costs were first extracted from DoD component submissions, then annualized to FY94 dollars using DoD deflators for O&M from the National Defense Budget Estimates for FY94, published by DoD(Comptroller) in May 1993. The deflators are 0.8741 for FY90, 0.9428 for FY91 and 0.9488 for FY92. The annualized "all other" costs for FY90-92 are ($ in millions):

(1) **TRAINEE TRAVEL AND PER DIEM.**

FISCAL YEAR	COST REPORTED TO OPM	DIVIDED BY DoD DEFLATOR =	FY94 ANNUALIZED COST
90	$ 136.409M	0.8741	$ 156.057M
91	182.210	0.9428	193.265
92	116.383	0.9488	122.663

(2) TRAINEE TUITION & OTHER.

FISCAL YEAR	COST REPORTED TO OPM	DIVIDED BY DoD DEFLATOR =	FY94 ANNUALIZED COST
90	$ 233.980M	0.8741	$ 267.681M
91	416.321	0.9428	441.579
92	208.876	0.9488	220.148

(3) EXTERNAL PURCHASES.

FISCAL YEAR	COST REPORTED TO OPM	DIVIDED BY DoD DEFLATOR =	FY94 ANNUALIZED COST
90	$ 24.318M	0.8741	$ 27.821M
91	15.776	0.9428	16.733
92	13.674	0.9488	14.412

(4) OTHER AGENCY COSTS.

FISCAL YEAR	COST REPORTED TO OPM	DIVIDED BY DoD DEFLATOR =	FY94 ANNUALIZED COST
90	$ 5.022M	0.8741	$ 5.745M
91	0.788	0.9428	0.836
92	12.453	0.9488	13.125